POLARIS®

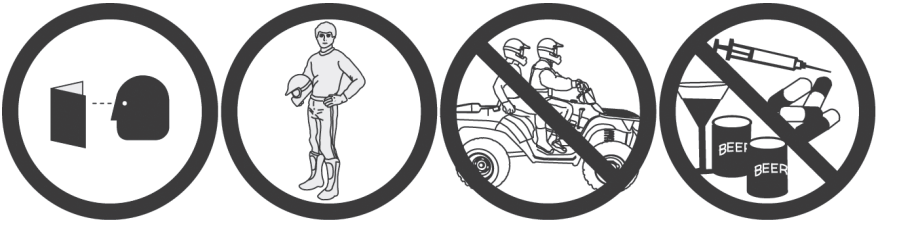
The Way Out.

Sportsman® Forest 500

Owner's Manual

for Maintenance and Safety

Read this manual carefully. It contains important safety information.
This is an adult vehicle only.
Operation is prohibited for those under 16 years of age.



Before you operate this vehicle, read the owner's manual

POLARIS
The Way Out.

For your nearest Polaris dealer,
call 1-800-POLARIS
or visit www.polarisindustries.com
Polaris Sales Inc., 2100 Hwy 55
Medina, MN 55340
Phone 1-888-704-5290
Part No. 9923423 Rev 01
Printed in USA

WELCOME

Thank you for purchasing a POLARIS vehicle, and welcome to our world-wide family of POLARIS owners. We proudly produce an exciting line of utility and recreational products.

- Snowmobiles
- All-terrain vehicles (ATVs)
- *RANGER* utility vehicles
- Victory Motorcycles®

Always follow the instructions and recommendations in this manual. The manual contains instructions for minor maintenance, but information about major repairs is outlined in the POLARIS Service Manual and should be performed only by a factory-certified Master Service Dealer® (MSD) technician. Please see your dealer for all of your service needs during (and after) the warranty period.

For more information about POLARIS, visit us online at www.polarisindustries.com.

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The original instructions for this vehicle are in English. Other languages are provided as translations of the original instructions.

SPORTSMAN FOREST 500 Owner's Manual
P/N 9923423

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INTRODUCTION

The following signal words and symbols appear throughout this manual and on your vehicle. Your safety is involved when these words and symbols are used. Become familiar with their meanings before reading the manual.

⚠

The safety alert symbol indicates a potential personal injury hazard.

DANGER

A DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

A WARNING indicates a hazardous situation which, if not avoided, may result in death or serious injury.

CAUTION

A CAUTION indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE

A NOTICE indicates a situation that may result in property damage.

The Prohibition Safety Sign indicates an action NOT to take in order to avoid a hazard.

The Mandatory Action Sign indicates an action that NEEDS to be taken to avoid a hazard.

⚠ WARNING

Failure to follow the warnings in this manual can result in serious injury or death. This POLARIS vehicle is not a toy and can be hazardous to operate. A collision or rollover can occur quickly, even during routine maneuvers, if you fail to take proper precautions.

Read and understand your owner's manual and all warnings before operating this POLARIS vehicle.

Safety Training

Never operate this vehicle without proper instruction. *Take a training course.*

For more information about safety, contact an authorized POLARIS dealer or visit the POLARIS web site at www.polarisindustries.com.

Age Restrictions

This vehicle is an ADULT VEHICLE ONLY. Operation is prohibited for anyone under 16 years of age.

Restrictions

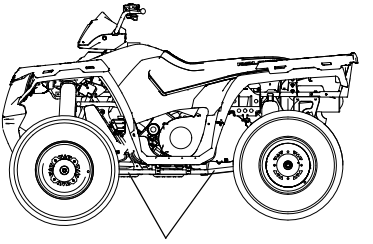
This vehicle is approved for OFF-ROAD TOWING ONLY. Towing a trailer with this vehicle on public roads is prohibited.

Equipment Modifications

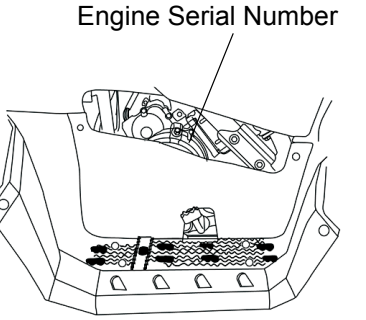
The warranty on your POLARIS vehicle may be terminated if any equipment has been added, or if any modifications have been made, that increase speed or power. The addition of certain accessories, including (but not limited to) mowers, blades, tires, sprayers and large racks may change vehicle handling. Use only POLARIS-approved accessories. Know their function and effect on the vehicle.

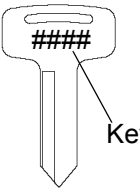
INTRODUCTION
Vehicle Identification Numbers

Record your vehicle's identification numbers and key number in the spaces provided. Remove the spare key and store it in a safe place. An ignition key can be duplicated only by ordering a POLARIS key blank (using your key number) and mating it with one of your existing keys. The ignition switch must be replaced if all keys are lost.



VIN
(front or rear frame)





Key Number

Vehicle Model Number: _____

Frame VIN: _____

Engine Serial Number: _____

Key Number: _____

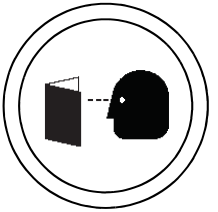
Operator Safety

⚠ WARNING

Serious injury or death can result if you do not follow the instructions and procedures listed here and throughout this manual.

⚠

Read and understand all warnings, cautions and operating procedures in this manual and on the safety labels before operating the vehicle.

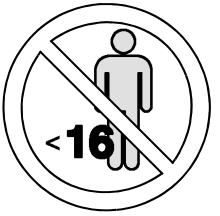


Never operate this vehicle without proper instruction. *Take a training course.* Beginners should receive training from a certified instructor.

Never permit others to operate the vehicle unless they have read and understand this manual and all product labels, and have completed a certified safety training course.

⚠

Never allow anyone under 16 years of age to operate this vehicle.

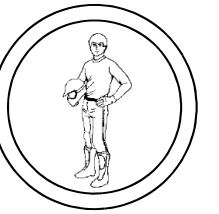


⚠

Never carry a passenger. The purpose of the long seat is to allow the operator to shift position.

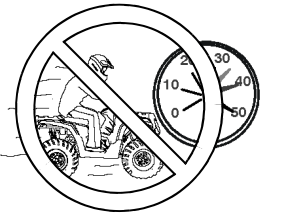
SAFETY
Operator Safety

Always wear an approved helmet that fits properly. Wear eye protection (goggles or face shield), gloves, boots, long sleeves and long pants.

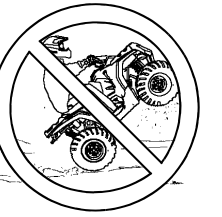


Never consume alcohol or drugs before or while operating this vehicle.

Never operate at excessive speeds. Travel and turn at speeds appropriate for the terrain, visibility, operating conditions and your experience.

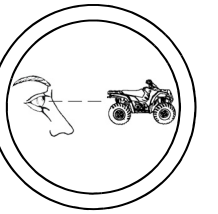


Never attempt jumps or other stunts.



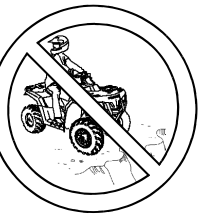
Operator Safety

Always inspect your POLARIS vehicle before each use to verify that it's in safe operating condition. Follow the inspection and maintenance procedures outlined in this manual. See page 53.



Keep both hands on the handlebars. Keep your feet on the footrests.

Always travel slowly when operating on unfamiliar terrain. Use extra caution.



Always follow the procedures outlined in this manual for turning. See page 19.

Never turn sharply at excessive speeds, which can lead to vehicle overturn.

SAFETY
Operator Safety

If the vehicle has been involved in an accident, always have an authorized POLARIS dealer inspect the entire vehicle for possible damage, including (but not limited to) brake, throttle and steering systems.

Never operate on hills too steep for the vehicle or for your abilities. Practice on smaller hills before attempting larger hills. Avoid climbing hills steeper than 25°.

Always follow the procedures outlined in this manual for driving on hills. See page 22.

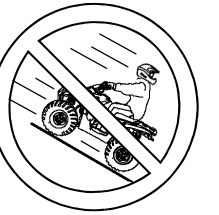
Always follow the procedures outlined in this manual for driving downhill and for braking on hills. See page 25.

Always follow the procedures outlined in this manual for crossing the side of a hill. See page 24.

Never attempt to turn the vehicle around on any hill until you've mastered (on level ground) the turning technique outlined in this manual.

Operator Safety

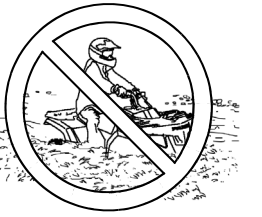
Always follow the procedures outlined in this manual for braking if you stall or roll backwards while climbing a hill. Never back down a hill. See page 26.



Always follow the procedures outlined in this manual for operating over obstacles. See page 21.

Always follow the procedures outlined in this manual for operating on slippery or loose surfaces. Use extra caution. Always avoid skidding or sliding. See page 20.

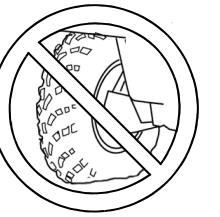
Always follow the procedures outlined in this manual for driving through water. Never drive through deep or fast-flowing water. See page 28.



SAFETY
Operator Safety

Always follow the procedures outlined in this manual for driving in reverse. See page 31.

Always use the size and type of tires specified for your vehicle. Maintain the proper tire pressure.



Never modify this POLARIS vehicle through improper installation or use of accessories.

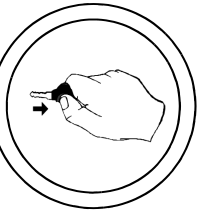
Never exceed the stated load capacity for your vehicle. Cargo must be properly distributed and securely attached. Reduce speed and follow the instructions in this manual for carrying cargo or towing. NEVER exceed 80 km/h when rear cargo loads are above 34 kg and/or front cargo loads are above 17 kg. Allow a greater distance for braking.

Operator Safety

Never operate the vehicle on a frozen body of water unless you have independently verified that the ice is sufficiently thick to support the weight and moving force of the vehicle, you and your cargo, together with any other vehicles in your party.

Operating on paved surfaces may affect the handling and control of the vehicle and could result in loss of control. Avoid sudden turns or swift movement of the handlebars.

Always remove the ignition key when the vehicle is not in use to prevent unauthorized use or accidental starting.



Always unlock the steering before starting the engine. See page 40.

Hot components can cause serious burns and fire. Do not touch hot exhaust system components. Always keep combustible materials away from the exhaust system.

For more information about safety, contact an authorized POLARIS dealer or visit the POLARIS web site at www.polarisindustries.com.

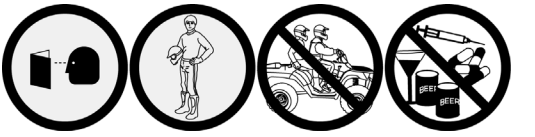
SAFETY
Safety Labels and Locations

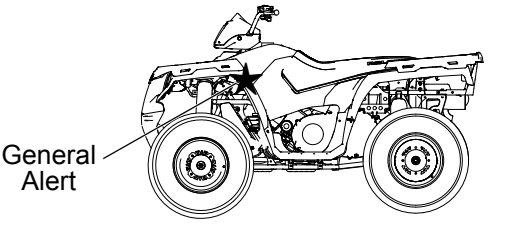
Warning labels have been placed on the vehicle for your protection. Read and follow the instructions on each label carefully. If a label becomes illegible or comes off, contact your POLARIS dealer to purchase a replacement. Replacement safety labels are provided by POLARIS at no charge. The part number is printed on the label.

The following pages repeat the information found on each label.

General Alert (Multi-Lingual)

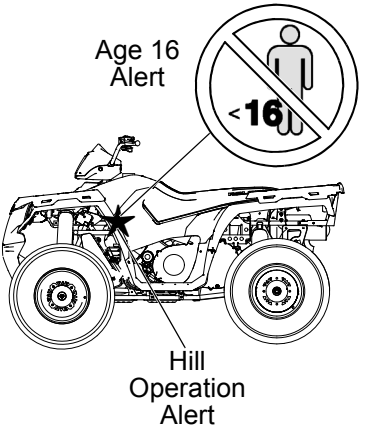
Before you operate this vehicle, read the owner's manual.



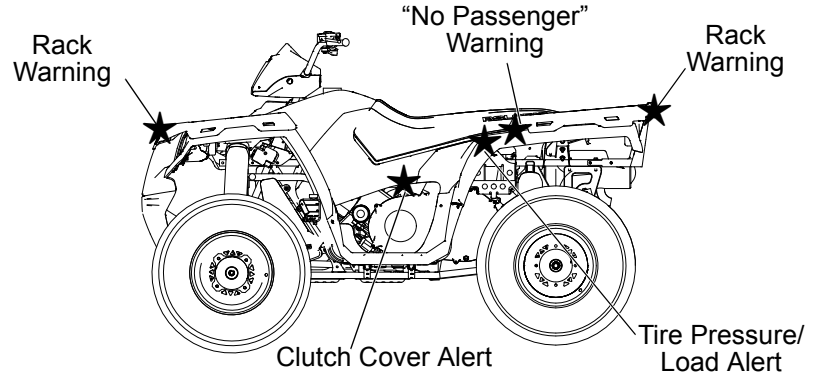


Hill Operation Alert

- Never operate this vehicle on HILLS steeper than 25 degrees ∠ 25°.
- To prevent flip-over on hilly terrain, when going up or down, use throttle and brakes gradually.



Safety Labels and Locations



"No Passenger" Warning

WARNING - NEVER ride as a passenger. Passengers can cause a loss of control, resulting in SEVERE INJURY or DEATH.

Tire Pressure/Load Alert

TIRE PRESSURE IN PSI (KPa): FRONT 5 (34.5) REAR 5 (34.5)

MAXIMUM WEIGHT CAPACITY (Gross Vehicle Weight) INCLUDING MACHINE, DRIVER AND CARGO IS 1200 LBS. (546 kg). Read Owner's Manual for more detailed loading information.

Clutch Cover Alert

NO STEP

Rack Warning, Front and Rear

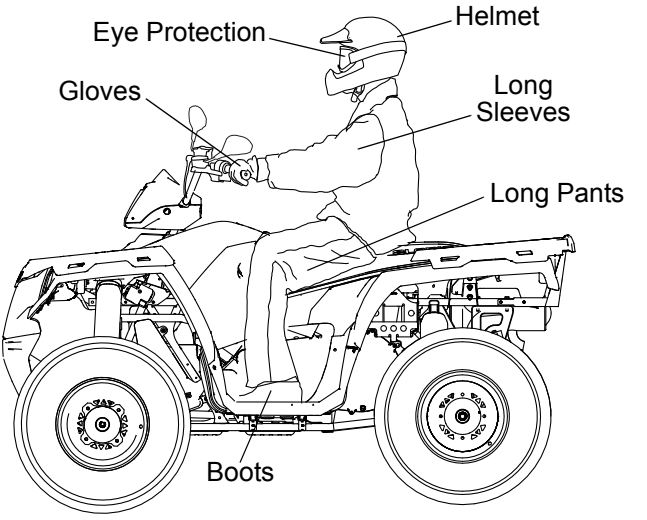
WARNING - DO NOT TOW FROM RACK OR BUMPER. Vehicle damage or tipover may result causing severe injury or death. Tow only from tow hooks or hitch. Maximum Rack Loads: Front 90 lbs. (41 kg) Rear 180 lbs. (82 kg)

Reverse Override Alert

Pushing reverse override button may cause sudden increases in power and traction if too much throttle is applied. Loss of control or forward flipover may result, especially in AWD. See Owner's Manual.

SAFETY
Safe Riding Gear

Always wear protective clothing to reduce the chance of injury.

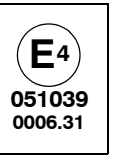


Helmet

Always wear a helmet that meets or exceeds established safety standards.

Approved helmets in the USA and Canada bear a U.S. Department of Transportation (DOT) label.

Approved helmets in Europe, Asia and Oceania bear the ECE 22.05 label. The ECE mark consists of a circle surrounding the letter E, followed by the distinguishing number of the country which has granted approval. The approval number and serial number will also be displayed on the label.



Safe Riding Gear

Eye Protection

Do not depend on eyeglasses or sunglasses for eye protection. Whenever riding a POLARIS vehicle, always wear shatterproof goggles or use a shatterproof helmet face shield. POLARIS recommends wearing approved Personal Protective Equipment (PPE) bearing markings such as VESC 8, V-8, Z87.1, or CE. Make sure protective eye wear is kept clean.

Gloves

Off-road style gloves with knuckle pads are the best for comfort and protection.

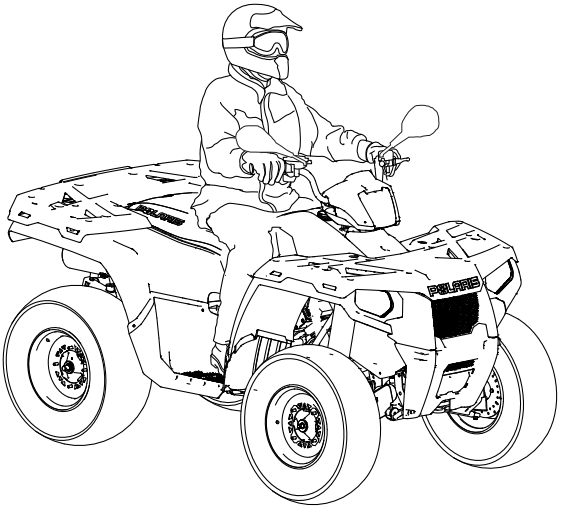
Boots

The best footwear is a pair of sturdy over-the-calf boots with low heels.

Clothing

Always wear long sleeves and long pants to protect arms and legs. Riding pants with kneepads and a jersey with shoulder pads provide the best protection.

SAFETY
Driving Safely
Driving Procedures



1. Sit upright. Keep your feet on the footrests. Keep both hands on the handlebars.
2. Apply the brakes.
3. Start the engine and allow it to warm up.
4. Shift the transmission into gear.
5. Check your surroundings and determine your path of travel.
6. Release the brakes.
7. Slowly squeeze the throttle lever toward the handlebar to begin driving.
8. Drive slowly. Practice maneuvering and using the throttle and brakes on level surfaces.

Driving Safely

Turning the Vehicle

1. Before turning, activate a turn signal to alert others of your intentions. Activate the left signal before a left turn. Activate the right signal before a right turn.
2. Steer in the direction of the turn, leaning your upper body to the inside of the turn while supporting your weight on the outer footrest. Use the same leaning technique for turning in reverse.
3. Practice turning at slow speeds before attempting to turn at faster speeds.

⚠

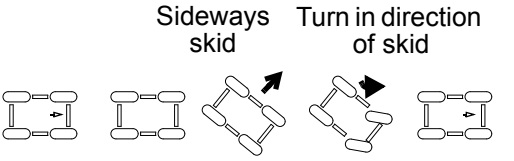
Always follow the procedures outlined in this manual for turning. Never turn sharply at excessive speeds, which can lead to vehicle overturn.

SAFETY
Driving Safely
Driving on Slippery Surfaces

Whenever driving on slippery or loose surfaces such as wet trails, gravel, snow or ice, follow these precautions:

1. Slow down before driving onto slippery surfaces.
2. Engage AWD before wheels begin to lose traction.
3. Be alert. Watch the trail. Avoid quick, sharp turns.

Tip: To correct a rear wheel skid, turn the handlebars in the same direction as the skid and shift body weight forward.



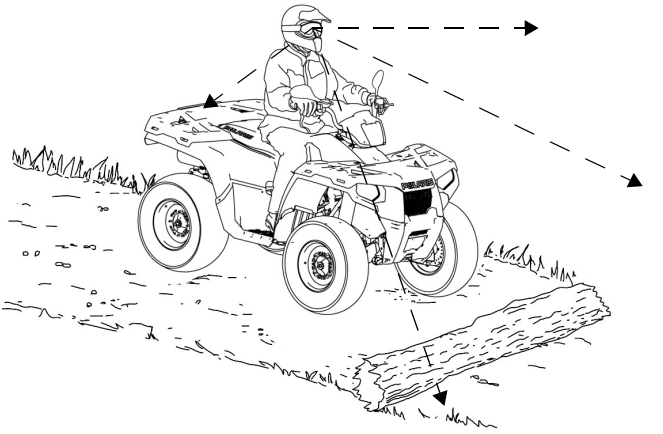
NOTICE: Severe damage to the drive train may occur if AWD is engaged while the wheels are spinning. Engage AWD when the wheels have traction.

⚠

Always follow the procedures outlined in this manual for operating on slippery or loose surfaces. Use extra caution. Always avoid skidding or sliding.

Driving Safely

Driving Over Obstacles

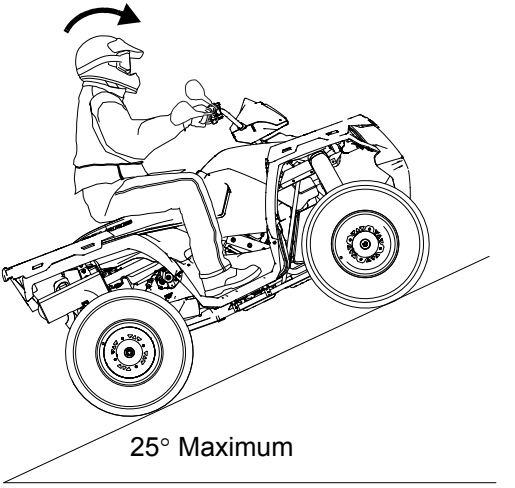


1. Always check for obstacles before operating in a new area. Serious injury or death can result if your vehicle comes in contact with a hidden obstacle.
2. Be alert. Watch the terrain. Use extra caution.
3. Never operate over large obstacles.
4. Avoid hazards such as logs, rocks and low branches.

⚠

Always follow the procedures outlined in this manual for operating over obstacles.

SAFETY
Driving Safely
Driving Uphill



Whenever traveling uphill, follow these precautions:

1. Avoid steep hills (25° maximum).
2. Check the terrain carefully.
3. Avoid hills with excessively slippery or loose surfaces.
4. Shift your weight uphill.
5. Drive straight uphill.
6. Keep your feet on the footrests.
7. Drive at a steady rate of speed to avoid stalling.
8. Be alert. Be prepared to take emergency action. This may include dismounting quickly.
9. Never open the throttle suddenly or make sudden gear changes.
10. Never go over the top of a hill at high speed.

Driving Safely

Driving Uphill

If all forward speed is lost:

Keep your weight uphill.

If the vehicle begins rolling downhill, never apply engine power. Never apply the brakes aggressively while rolling backwards.

Apply the brakes gradually. When fully stopped, lock the hydraulic parking brake. See page 39.

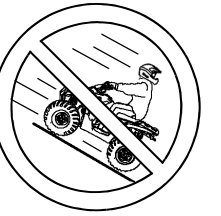
Dismount on the uphill side, or to either side if the vehicle is pointed straight uphill. Turn the vehicle around using the K-Turn. See page 26.

⚠

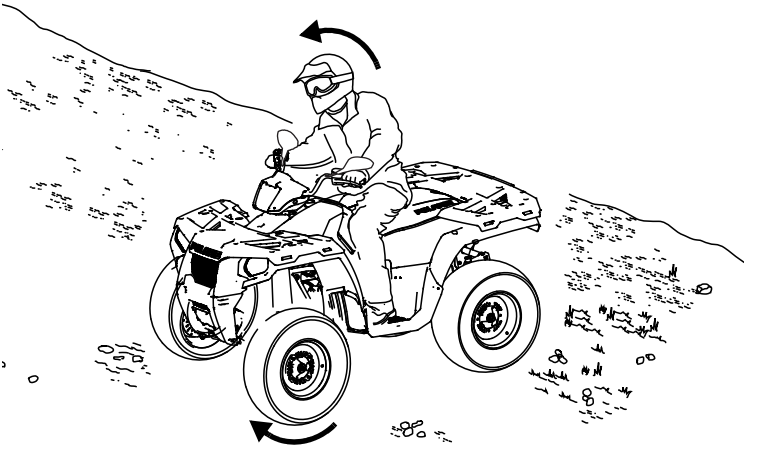
Always follow the procedures outlined in this manual for climbing hills. Avoid climbing hills steeper than 25°.

⚠

Always follow the procedures outlined in this manual for braking if you stall or roll backwards while climbing a hill. Never back down a hill.



SAFETY
Driving Safely
Driving on a Sidehill (Sidehilling)



Avoid crossing the side of a hill (sidehilling) if possible. If sidehilling is necessary, follow these precautions:

1. Slow down.
2. Avoid hills with excessively slippery or loose surfaces.
3. Shift your weight uphill.
4. Avoid crossing the sides of steep hills.
5. Keep your feet on the footrests.
6. Steer slightly into the hill.
7. If the vehicle begins to tip, quickly turn the front wheels downhill (if possible) or dismount on the uphill side *immediately*!

⚠

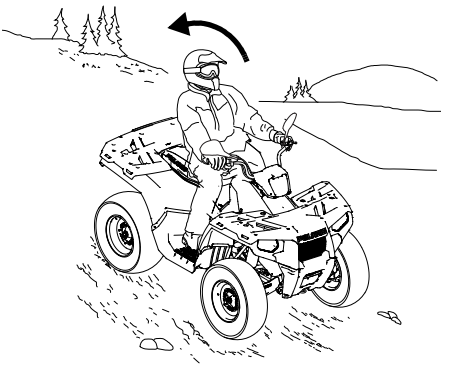
Always follow the procedures outlined in this manual for crossing the side of a hill.

Never attempt to turn the vehicle around on any hill until you've mastered (on level ground) the turning technique outlined in this manual.

Driving Safely

Driving Downhill

When driving downhill, follow these precautions:



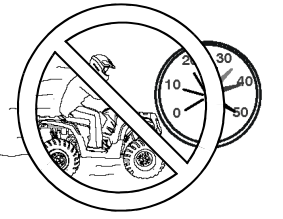
1. Check the terrain carefully.
2. Avoid hills with excessively slippery or loose surfaces.
3. Never drive downhill at high speed.
4. Slow down.
5. Avoid driving downhill at an angle, which can cause the vehicle to pitch sharply to one side. Drive straight downhill.
6. Shift your weight rearward.
7. Apply the brakes *slightly* to aid in slowing.

⚠

Always follow the procedures outlined in this manual for driving downhill and for braking on hills.

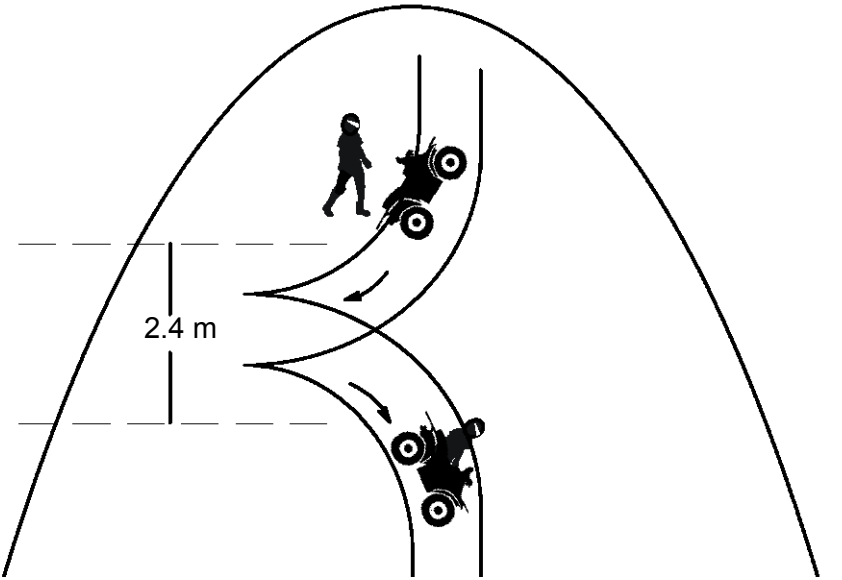
⚠

Never operate at excessive speeds. Travel and turn at speeds appropriate for the terrain, visibility, operating conditions and your experience.



SAFETY
Driving Safely
Turning Around on a Hill (K-Turn)

If the vehicle stalls while climbing a hill, never back it down the hill! Use the K-turn to turn around.



1. Stop the vehicle. Keep your weight uphill.
2. Lock the hydraulic parking brake.
3. Leave the transmission in forward gear. Turn the engine off.
4. Dismount on the uphill side of the vehicle, or on the left if the vehicle is pointing straight uphill.
5. Stay uphill of the vehicle and turn the handlebars full left.
6. Squeeze the brake lever to release the parking brake.
7. Slowly release the brake lever and allow the vehicle to roll around to your right until it's pointing across the hill or slightly downward.

Driving Safely

Turning Around on a Hill (K-Turn)

8. Lock the hydraulic parking brake.
9. Remount from the uphill side. Keep your weight uphill.
10. Apply the foot brake.
11. With the transmission still in forward, start the engine.
12. Squeeze and release the brake lever to release the parking brake.
13. Release the foot brake and drive *slowly* downhill. Control speed with either the hand or foot brake until the vehicle is on level ground.

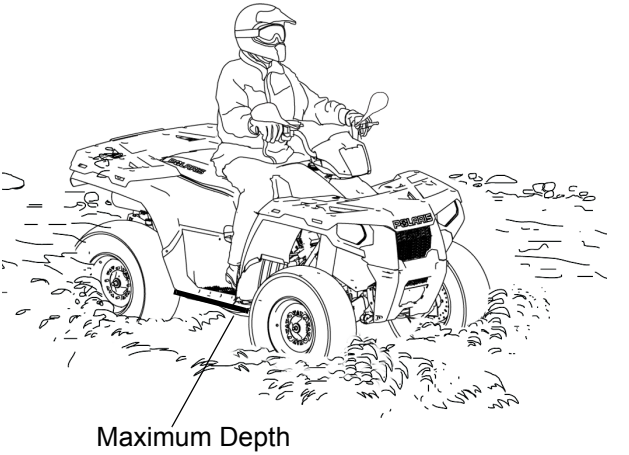
⚠

Always follow the procedures outlined in this manual for climbing hills. See page 22.

⚠

Always follow the procedures outlined in this manual for braking if you stall or roll backwards while climbing a hill. Never back down a hill.

SAFETY
Driving Safely
Driving Through Water



Follow these procedures when driving through water:

1. Check water depth and current before crossing.
2. Avoid operating in water deeper than the bottom of the footrests. If it's unavoidable, travel slowly, balance your weight carefully and avoid sudden movements. Maintain a slow and steady forward motion. Do not make sudden turns, stops or throttle changes.
3. Choose a crossing where both banks have gradual inclines.
4. Drive slowly. Avoid rocks and obstacles.
5. Wet brakes may have reduced stopping ability. Always test your brakes after leaving water. If necessary, apply them lightly several times to allow friction to dry out the pads.

Driving Safely

Driving Through Water

If your vehicle becomes fully immersed, and it's impossible to take it to a dealer before starting it, follow the steps described on page 100. Have the vehicle serviced by your dealer promptly.

If water has been ingested into the transmission (PVT), follow the procedure on page 105.

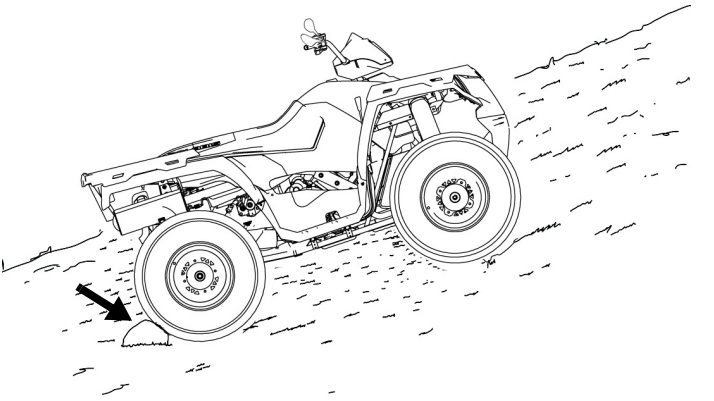
⚠

Always follow the procedures outlined in this manual for driving through water. Never drive through deep or fast-flowing water.

⚠

If the vehicle stops while fully submerged, major engine damage can result if the machine is not thoroughly inspected. Take the vehicle to your dealer before starting the engine.

SAFETY
Driving Safely
Parking on an Incline

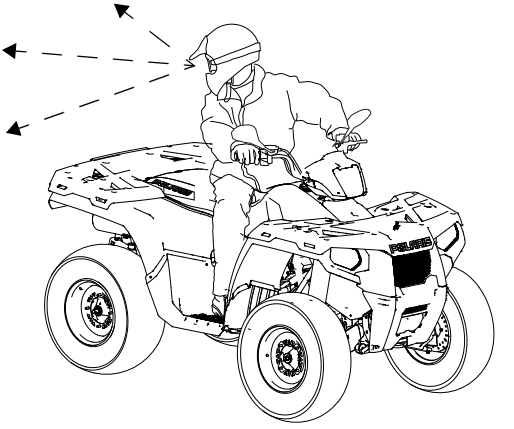


Avoid parking on an incline. If it's unavoidable, follow these precautions:

1. Stop the engine.
2. Place the transmission in PARK.
3. Always block the rear wheels on the downhill side.
4. Turn the fuel valve off.

Driving Safely

Driving in Reverse



Follow these precautions when operating in reverse:

1. Avoid backing downhill.
2. Always check for obstacles or people behind the vehicle before backing.
3. Drive slowly.
4. Apply the foot brake *lightly* for stopping.
5. Avoid turning at sharp angles.
6. Do not use the override switch unless additional power is required for vehicle movement. Use with caution.

Tip: Reverse speed is greatly increased when the override switch is used. Do not operate at full throttle. Apply just enough throttle to maintain the desired speed.

⚠

Excessive throttle operation while in the speed limit mode may cause fuel to build in the exhaust, resulting in engine popping and/or engine damage.

⚠

Always follow the procedures outlined in this manual for driving in reverse.

SAFETY
Driving Safely
Hauling Cargo

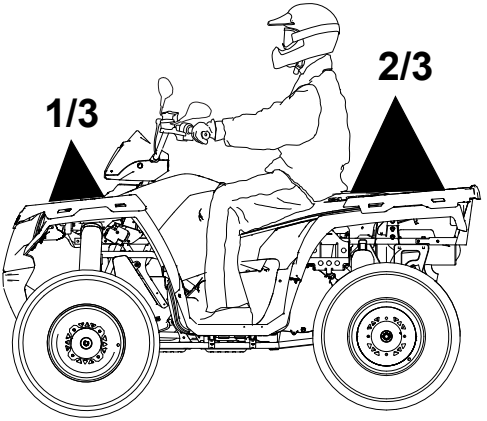
⚠

Overloading the vehicle or carrying or towing cargo improperly can alter vehicle handling and may cause loss of control or brake instability. Always follow these precautions when hauling cargo.

- Read and understand the load distribution warnings listed on the vehicle warning labels.
- Never exceed the stated load capacity for this vehicle.
- REDUCE SPEED AND ALLOW GREATER DISTANCES FOR BRAKING WHEN HAULING CARGO OR TOWING. Use extreme caution when applying brakes. Avoid situations that require backing downhill.
- When operating over rough or hilly terrain, reduce speed, cargo and towed load to maintain stable driving conditions.
- CARRY LOADS AS LOW ON THE RACK AS POSSIBLE. Carrying a load high on the rack raises the center of gravity of the vehicle and creates a less stable operating condition. Reduce load weight when cargo is high. Secure off-centered loads that cannot be centered and operate with extra caution.
- CARRYING A LOAD on only one rack may cause the vehicle to overturn. Split the load between the front rack and rear rack, with 1/3 in the front and 2/3 in the back. Do not exceed load capacities. See specifications beginning on page 120.
- SECURE ALL LOADS BEFORE OPERATING. Unsecured loads can create unstable operating conditions, which could result in loss of control of the vehicle.
- OPERATE ONLY WITH STABLE AND SAFELY ARRANGED LOADS. When handling off-centered loads that cannot be centered, securely fasten the load and operate with extra caution. Always attach the tow load to the hitch point designated for your vehicle.
- USE EXTREME CAUTION when operating with loads that extend over the rack sides. Stability and maneuverability may be adversely affected, causing the vehicle to overturn.
- NEVER exceed 80 km/h when rear cargo loads are above 34 kg and/or front cargo loads are above 17 kg.
- TOWING is approved OFF-ROAD ONLY. Operating this vehicle with a trailer on public roads is prohibited.
- TOWING SPEED should never exceed 16 km/h. Never exceed 8 km/h when towing loads in rough terrain, while cornering, or while ascending or descending hills.

Driving Safely

Hauling Cargo



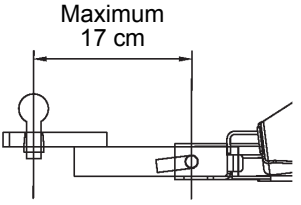
Towing Loads

Towing is approved OFF-ROAD ONLY. Operating this vehicle with a trailer on public roads is prohibited. Do not exceed the maximum capacities when towing. Do not tow any trailer on a grade steeper than 15°.

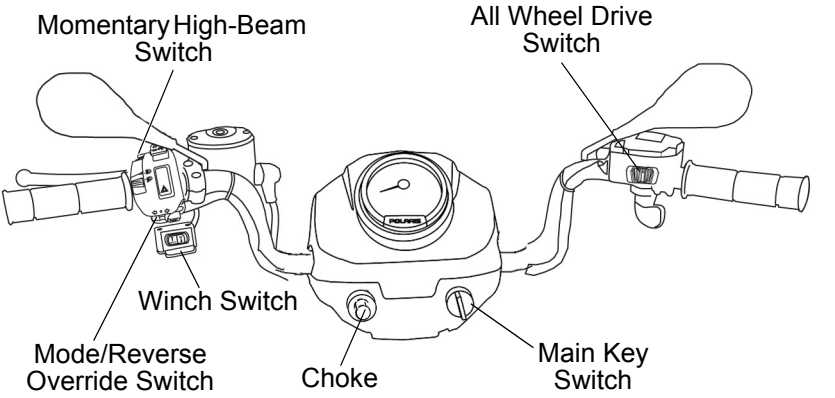
Unbraked Trailer Towing Capacity is 1786 lbs. (810 kg) based on EU Directive 76/432/EC.

⚠

Using an improper hitch or exceeding the maximum tongue weight capacity can result in serious damage to the vehicle and will void your warranty. Never install a hitch longer than 17 cm. Never install automotive accessories on your POLARIS vehicle. Always install POLARIS-approved (or equivalent) accessories designed for use on the vehicle.



FEATURES AND CONTROLS
Switches



Mode/Reverse Override Switch

Press the switch to toggle through the speedometer display modes (except in reverse). See page 45.

To gain additional power while operating in reverse, press the override switch before opening the throttle. This will cancel the reverse speed limit function.

The override switch also allows activation of All Wheel Drive in reverse, if the AWD switch is on.

⚠

Activating the override switch with the throttle open and while operating in reverse can cause loss of control. Do not activate the override switch while the throttle is open.

Momentary High Beam Switch

Press this switch with your left forefinger to activate the headlight high beam. The lights will return to low beam when the switch is released.

All Wheel Drive Switch

See page 44 for all wheel drive information.

Winch Switch

See page 56 for winch information.

Switches

Main Key Switch

End all electrical power to the vehicle.

LIGHTS ON position turns the headlights on.

Start the engine. The headlights are not on in this position.

After starting the engine, release the key switch to the *PARKING LIGHTS ON* position. The parking lights and taillights are on in this position.

See page 54 for starting procedures.

Engine Stop Switch

The engine will not start or run when the switch is in the OFF position.

OFF

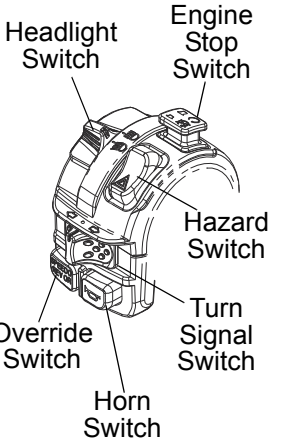
RUN

Headlight Switch

The lights do not operate unless the main key switch is on and the engine stop switch is in the RUN position.

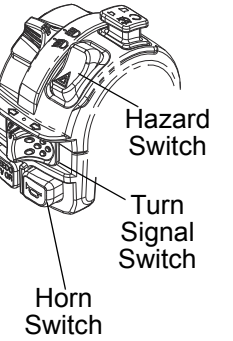
High Beam

Low Beam



FEATURES AND CONTROLS
Switches
Turn Signal Switch

⇦ ⇨ Push the toggle switch either left or right to activate the corresponding turn signal light. The indicator on the pod will also flash. Return the toggle to the center position to end the signal.



Horn Switch

Press the horn switch to sound the horn.

Hazard Warning Switch

Push the hazard warning switch to cause all turn signal lights to flash simultaneously. Use this feature to alert others of an emergency or other situation requiring caution.

Mirrors

Use the mirrors to assist in traffic maneuvers. Always check and adjust the mirrors before driving the vehicle.

Throttle Lever

⚠

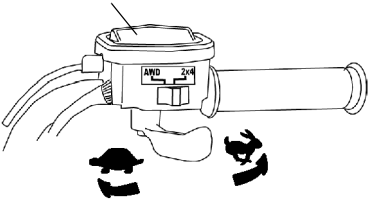
Failure to check or maintain proper operation of the throttle system can result in an accident if the throttle lever sticks during operation. Check the lever for proper operation before starting the engine. Check occasionally during operation.

Do not start or operate a vehicle with sticking or improperly operating throttle controls. Contact your dealer for repair if throttle problems arise.

Press the throttle lever to increase engine speed and vehicle movement.

Release the lever to reduce engine speed and vehicle movement.

Electronic Throttle Control



Electronic Throttle Control (ETC)

ETC causes the engine to stop if the throttle cable sticks in an open position when the operator releases the throttle lever.

⚠

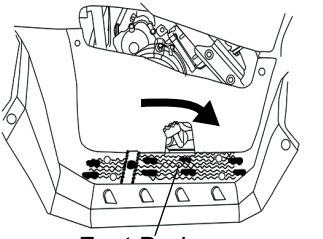
The Electronic Throttle Control (ETC) stops the engine in the event of a throttle system malfunction. Do not modify the ETC system or replace it with other throttle mechanisms.

FEATURES AND CONTROLS

Foot Brake

The all-wheel foot brake is located on the right footrest. The foot brake operates both front and rear brakes. Press the brake pedal down with your foot to apply the all-wheel brakes.

If the rear wheels begin to skid or slide while using the foot brake, reduce brake pressure.

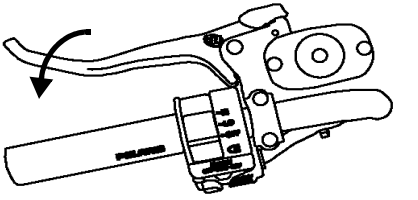


Foot Brake

Hand Brake Lever

The hand brake operates both front and rear brakes. Squeeze the brake lever toward the handlebar to apply the all-wheel brakes.

If the rear wheels begin to skid or slide while using the brake, reduce lever pressure.



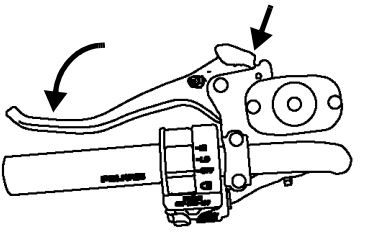
⚠

Aggressively applying the brakes when backing down a hill may cause rear tipover. Aggressively applying the brakes while moving forward may cause the rear wheels to skid and result in loss of control.

Read this owner's manual and understand the operation of all brake systems on this vehicle. Always use caution whenever applying the brakes.

Parking Brake

Locking the Parking Brake



1. Place the transmission in PARK.
2. Squeeze the brake lever toward the handlebar.
3. Push the parking brake lock forward to engage the lock.
4. Release the brake lever.
5. To release the parking brake lock, squeeze and release the brake lever.

⚠

Operating the vehicle while the parking brake is engaged could result in an accident and serious injury or death. Always release the parking brake lock before operating.

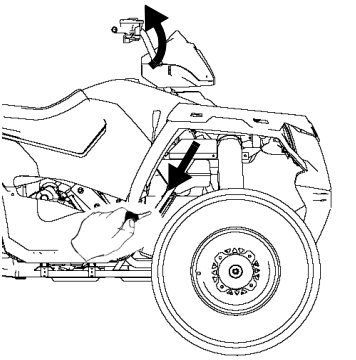
FEATURES AND CONTROLS

Steering Lock

Lock the steering to prevent unauthorized use or theft of the vehicle.

Tip: Place the steering lock keys in a safe place. The lock must be replaced if the keys are lost.

1. Turn the handlebars to the full left position.
2. Insert the steering lock key and turn it clockwise.
3. Remove the key.
4. Reverse the procedure to unlock the steering.



⚠

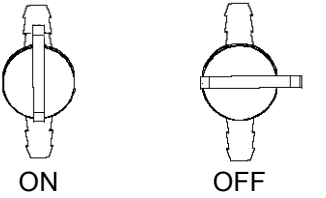
The handlebars are locked in the full left position when the steering is locked. Always unlock the steering before starting the engine.

Fuel Valve

The fuel valve is located in the left front wheel well.

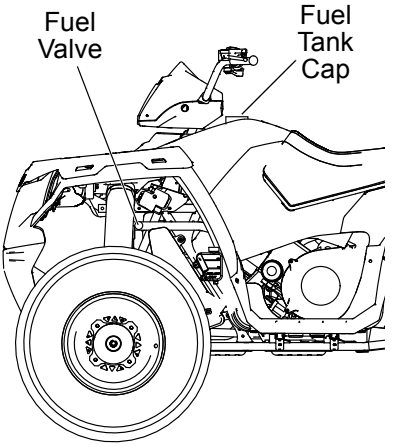
OFF: For vehicle storage and when transporting.

ON: For normal operation.



Choke

The choke assists in starting a cold engine. Refer to the engine starting procedure on page 54 for correct choke and throttle settings during starting.



Fuel Filter

The in-line fuel filter should be replaced by your dealer after every 100 hours of operation or annually. Do not attempt to clean the fuel filter.

Fuel Tank Cap

This vehicle is equipped with a digital fuel gauge that will indicate a low fuel condition. Refuel when the gauge indicates a low fuel condition.

Always refuel with the engine stopped, and outdoors or in a well ventilated area. Refuel on a level surface.

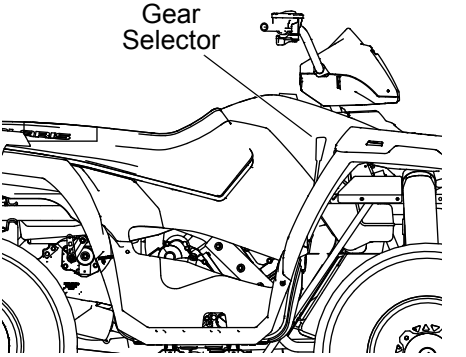
Remove the fuel tank cap to add fuel to the fuel tank. Use either leaded or unleaded gasoline with a minimum pump octane number of 87=(R+M/2) octane. *Do not use fuel with ethanol content greater than 10 percent, such as E-85 fuel.*

Transmission Gear Selector

The transmission gear selector is located on the right side of the vehicle.

H: High Gear
L: Low Gear
N: Neutral
R: Reverse
P: Park

To shift gears, brake to a complete stop. When the engine is idling, move the lever to the desired gear.



⚠

Shifting gears with the engine speed above idle or while the vehicle is moving can cause transmission damage.

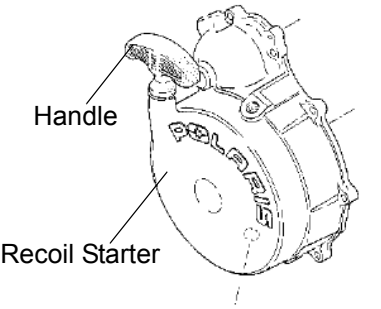
Whenever the vehicle is left unattended, always place the transmission in PARK. The transmission is locked when it's in PARK.

Belt Life

To extend belt life, use low forward gear when pulling a heavy load at less than 11 km/h for extended periods and when operating uphill at a slow speed.

Recoil Starter (if equipped)

If the battery is too weak to start the engine, use the recoil starter. Follow the starting procedures on page 54, cranking the engine with the recoil starter instead of the main key switch.



1. Grasp the recoil starter rope handle tightly.
2. Pull slightly until the starter mechanism engages.
3. Pull the rope abruptly to start the engine.

⚠

Extending the recoil starter rope until it stops can cause damage to the recoil assembly. Do not extend the starter rope so far that it stops.

If the starter rope handle is not seated properly, water may enter the recoil housing and damage components. Make sure the handle is fully seated on the recoil housing, especially when traveling in wet areas.

FEATURES AND CONTROLS
All Wheel Drive (AWD) System

The AWD switch may be turned on or off while the vehicle is moving. AWD will not engage until engine speed is below 3100 RPM. AWD remains engaged until the switch is turned off. There is no limit to the length of time the vehicle may remain in AWD.

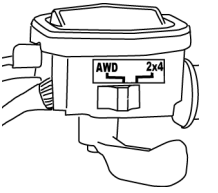
If the switch is turned off while the demand drive unit is engaged, it will not disengage until the rear wheels regain traction. Engage AWD before getting into situations where maximum traction is needed. If the rear wheels are spinning, release the throttle before switching to AWD.

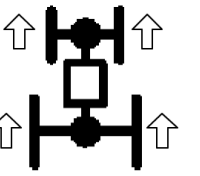
Tip: The override switch allows activation of AWD in reverse if the AWD switch is on. See page 34.

⚠

Switching to AWD while the rear wheels are spinning may cause severe drive shaft and gearcase damage. Always switch to AWD while the rear wheels have traction or are at rest.

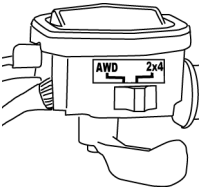
AWD

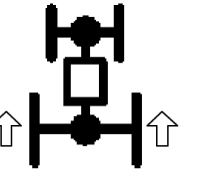




When the AWD switch is on, the vehicle is in four-wheel drive and the differential is locked, providing maximum traction. The demand drive unit automatically engages when the rear wheels lose traction. When the rear wheels regain traction, the demand drive unit automatically disengages.

2X4



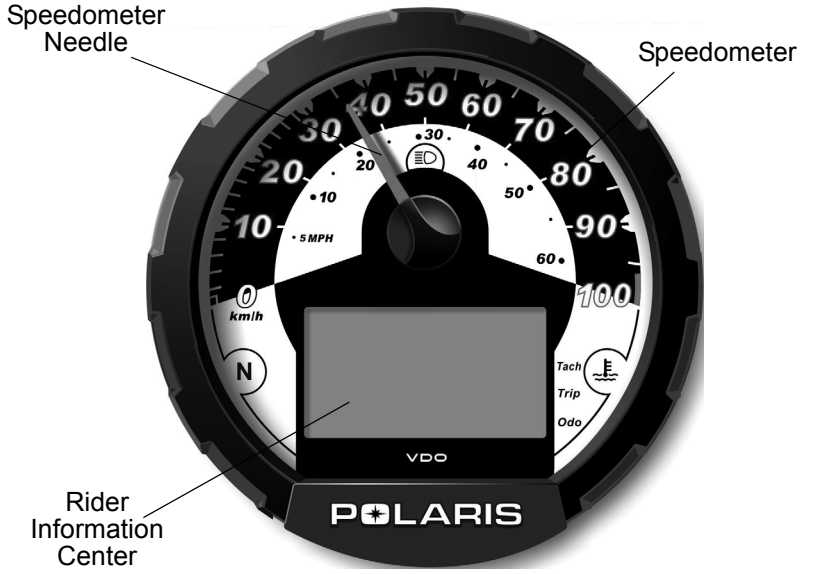


When the 2X4 switch is on, the vehicle is in two-wheel drive at all times and the differential is locked.

Instrument Cluster

Your vehicle is equipped with an instrument cluster that senses vehicle speed from the right front wheel. In addition to showing vehicle speed, the speedometer needle flashes when a warning condition exists.

The instrument cluster measures distance in miles as well as hours of operation. It also includes a reverse speed limiter function that limits the vehicle's speed to approximately 11-14 km/h. Refer to page 34 for additional information.

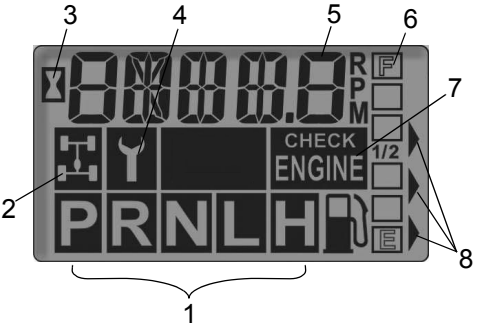


High water pressure may damage vehicle components. Wash the vehicle by hand or with a garden hose using mild soap.

Certain products, including insect repellents and chemicals, will damage the speedometer lens and other plastic surfaces. Do not use alcohol to clean the instrument cluster. Do not allow insect sprays to contact the lens. Immediately clean off any gasoline that splashes on the instrument cluster.

FEATURES AND CONTROLS
Instrument Cluster
Rider Information Center

The rider information center is located in the instrument cluster. All segments will light up for 2.5 seconds at start-up. If the instrument cluster fails to illuminate, a battery over-voltage may have occurred and the instrument cluster may have shut off to protect the electronic speedometer. If this occurs, take the vehicle to your POLARIS dealer for proper diagnosis.



1. **Gear Indicator** - This indicator displays gear shifter position:
   H = High Gear
   L = Low Gear
   N = Neutral
   R = Reverse Gear
   P = Park
2. **AWD Indicator** - This indicator illuminates when the AWD switch is in the AWD position.
3. **Engine Hour Display Indicator**
4. **Service Interval/Diagnostic Mode Indicator**
5. **Odometer/Tachometer/Tripmeter/ Hour Meter**
6. **Fuel Gauge** - The segments of the fuel gauge show the level of fuel in the fuel tank. When the last segment clears, a low fuel warning is activated. All segments will flash, FUEL will display in the LCD, and the speedometer needle will blink. Refuel immediately.
7. **Check Engine Warning Indicator** - The word HOT displays if the engine overheats. Do not operate the vehicle if this warning appears. Serious engine damage could result.
8. **Mode Indicator**

Instrument Cluster

Rider Information Center

Standard Modes

Use the MODE button to toggle through the mode options. The reverse override button is also the MODE button. See page 34.

NOTE: The transmission cannot be in reverse when using this feature.

Odometer Mode

The odometer records the miles traveled by the vehicle.

Trip Meter Mode

The trip meter records the miles traveled by the vehicle on each trip if it's reset before each trip. To reset the trip meter, select the trip meter mode. Press and hold the mode button (override button) until the total changes to 0.

NOTE: In the Rider Information Center, the trip meter display contains a decimal point, but the odometer displays without a decimal point.

Hour Meter Mode

This mode logs the total hours the engine has been in operation.

Tachometer Mode

The engine RPM is displayed digitally.

NOTE: Small fluctuations in the RPM from day to day may be normal because of changes in humidity, temperature and elevation.

FEATURES AND CONTROLS
Instrument Cluster
Rider Information Center
Diagnostic Mode

The wrench icon will display when the gauge is in the diagnostic mode. To exit the diagnostic mode, turn the key switch off and on. Any movement of the tires will also cause the gauge to exit the diagnostic mode.

To enter the diagnostics mode:

1. Turn the key switch off and wait 10 seconds.
2. Lock the parking brake.
3. Place the transmission in neutral.
4. Hold the mode/reverse override button and turn the key switch on. Release the switch as soon as the display is activated.
5. Use the mode button to toggle through the diagnostic screens.

Instrument Cluster

Rider Information Center

Diagnostic Mode

Battery Voltage Screen

View this screen to check battery voltage level.

Tachometer Screen

View the tachometer to check engine speed.

AWD Diagnostic Screen

The gauge indicates whether or not current is flowing through the AWD coil (only on models with switchable AWD). This screen is for informational purposes only. Please see your dealer for all major repairs.

Gear Circuit Diagnostic Screen

This screen displays the resistance value (in ohms) being read at the gear switch input of the gauge. This screen is for informational purposes only. Please see your dealer for all major repairs.

Programmable service interval

When the hours of engine operation equal the programmed service interval setting, the wrench icon will flash for 5 seconds each time the engine is started. When this feature is enabled, it provides a convenient reminder to perform routine maintenance. See page 50.

The service interval is programmed at 50 hours at the factory.

FEATURES AND CONTROLS
Instrument Cluster
Rider Information Center
Diagnostic Mode
Programmable service interval

To enable or disable the service interval:

1. Enter the diagnostic mode.
2. Toggle to the service interval screen.
3. Press and hold the mode button for about 7 seconds, until either ON or OFF appears in the Rider Information Center, depending on your preference.

To reset the service interval:

1. Enter the diagnostic mode.
2. Toggle to the service interval screen.
3. Press and hold the mode button for 2-3 seconds, until the wrench icon flashes. Release the button.
4. Press and release the mode button once to advance the setting by one hour. Press and *hold* the mode button to advance the hours quickly.
5. If you scroll past the intended number, press and hold the button until the hours cycle back to zero.
6. When the desired setting is displayed, wait until the wrench icon stops flashing. The new service interval is now programmed.

Miles/Kilometers toggle

The display in the tripmeter and odometer can be changed to display either standard or metric units of measurement.

1. Enter the diagnostic mode.
2. Toggle to the screen that displays either kilometers (KM) or miles (MP).
3. Press and hold the mode button until the letters flash, then press and release the button once. When the display stops flashing, the mode has been set.

Fuel Safety

⚠ WARNING

Gasoline is highly flammable and explosive under certain conditions.

- Use extreme caution whenever handling gasoline.
- Refuel with the engine stopped. Refuel outdoors or in a well-ventilated area.
- Never fill a fuel container while it's on the vehicle. Static electricity between the rack and container could cause a spark.
- Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored.
- Do not overfill the tank. Do not fill the tank neck.
- If gasoline spills on your skin or clothing, immediately wash it off with soap and water and change clothing.
- Turn the fuel valve off whenever the vehicle is stored or parked.

OPERATION
Break-In Period

The break-in period for your new POLARIS vehicle is the first ten hours of operation, or the time it takes to use the first two full tanks of gasoline. No single action on your part will increase the life and performance of your vehicle more than following the procedures for a proper break-in. Careful treatment of a new engine and drive components will result in more efficient performance and longer life for these components.

Do not operate at full throttle or high speeds for extended periods during the first three hours of use.

Engine and Drivetrain Break-in

1. Fill the fuel tank with the recommended fuel. See page 41.
2. Check the oil level. Add oil if necessary.
3. Select an open area that allows room to familiarize yourself with vehicle operation and handling.
4. Drive slowly. Vary the throttle positions. Do not operate at sustained idle.
5. Perform regular checks on fluid levels, controls and areas outlined on the daily pre-ride inspection checklist. See page 53.
6. Pull only light loads.
7. Change the oil and filter at 20 hours or one month.

PVT Break-in (Clutches/Belt)

Break in the clutches and belt by operating at slower speeds during the break-in period as recommended. Pull only light loads. Avoid aggressive acceleration and high speed operation during the break-in period.

If a belt fails, always clean away all debris when replacing the belt.

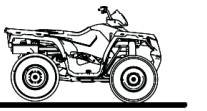
Pre-Ride Checklist

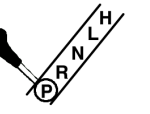
Item	Remarks	Page
Foot brake	Ensure proper operation	38
Hand brake/lever travel	Ensure proper operation	85
Brake fluid	Ensure proper level	82
Front suspension	Inspect, lubricate if necessary	68
Rear suspension	Inspect, lubricate if necessary	68
Steering/steering lock	Unlock the steering; ensure free operation	40
Tires	Inspect condition and pressure	90
Wheels/fasteners	Inspect, ensure fastener tightness	90
Frame nuts, bolts, fasteners	Inspect, ensure tightness	-
Fuel and oil	Ensure proper levels	41 70
Throttle	Ensure proper operation	37 89
Indicator lights/switches	Ensure proper operation	34
Engine stop switch	Ensure proper operation	35
Mirrors	Adjust for best side/rear vision	37
Air filter, pre-filter	Inspect, clean	92
Air box sediment tube	Drain deposits whenever visible	-
Headlamp	Check operation, apply POLARIS dielectric grease when lamp is replaced	95
Brake light/tail lamp	Check operation, apply POLARIS dielectric grease when lamp is replaced	96
Riding gear	Wear approved helmet, goggles, and protective clothing	16
Winch	Inspect cable and switch.	57-58

OPERATION
Starting the Engine

⚠

Engine exhaust contains poisonous carbon monoxide and can cause loss of consciousness resulting in severe injury or death. Never run an engine in an enclosed area.



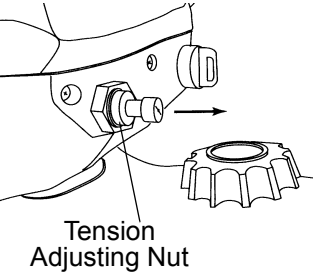


1. Position the vehicle on a level surface.
2. Place the transmission in PARK.
3. Turn the fuel valve on.
4. Sit on the vehicle.

Tip: The starter interlock will prevent the engine from starting if the transmission is in gear and the brake is not engaged.

Tip: Do not use the choke if starting a warm engine. Excessive use of the choke can cause the spark plug to become wet fouled.

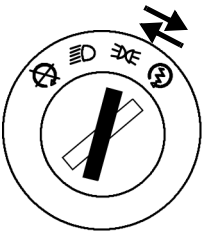
5. If the engine is cold, pull the choke knob out until it stops. If the knob doesn't stay where positioned, increase the tension by rotating the tension adjusting nut clockwise.



Tip: The variable choke is fully on when the knob is pulled completely out. The choke is off when the knob is pushed completely in. The choke can be adjusted gradually, depending on how much choke is needed for starting. Be sure the choke is off during operation, as excess fuel washing into the engine oil will increase wear on engine components.

6. Move the engine stop switch to RUN.

Starting the Engine



7. Do not press the throttle while starting the engine. Turn the ignition key past the PARKING LIGHTS ON position to engage the starter. Activate the starter for a maximum of five seconds, releasing the key when the engine starts.
8. If the engine does not start, release the starter and wait five seconds.
9. Repeat steps 7 and 8 until the engine starts.

⚠

Operating the vehicle immediately after starting could cause engine damage. Allow the engine to warm up for several minutes before operating.

10. If a warm engine has cooled to a point where it does not readily start, intermittent use of the choke (pulled half way out) may be necessary. If the engine is over-choked when warm, depress the throttle lever fully while cranking to aid in starting. Release the throttle lever *immediately* after the engine starts. If the engine does not start and all conditions are favorable, change the spark plug and try again.
11. If the engine slows or stops, position the choke knob half way in to allow proper engine warm up. Vary the engine RPM slightly with the throttle to aid in warm-up. When the engine idles smoothly, push the choke completely in.

Cold Weather Operation

Internal engine condensation increases as outside temperatures decrease. If the vehicle is used year-round, check the oil level frequently. A rising oil level could indicate the accumulation of contaminates such as water or excess fuel in the bottom of the crankcase. Water in the bottom of the crankcase can lead to engine damage and must be drained. Water accumulation increases as outside temperature decreases.

See your POLARIS dealer for engine heater kits, which provide quicker warm-ups and easier starting in colder weather.

WINCH GUIDE

The responsibility for safe operation of the winch ultimately rests with you, the operator. Read and understand all safety precautions and operating instructions before operating the winch. Careless operation can result in serious injury. DO NOT use the winch to lift or move people.

Winch Safety Precautions

1. Be alert. Do not operate the winch under the influence of drugs, alcohol or medication.
2. Practice using the winch so you are prepared to use it in an emergency situation.

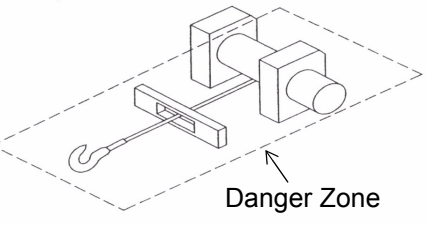
⚠ WARNING

Never connect DC powered winches to AC current. Motor damage or fatal shock may occur.

⚠ DANGER

Stand clear of the cable and load during winching. Keep helpers and spectators at a safe distance. If a cable pulls loose or breaks under the load, it can lash back with dangerous force.

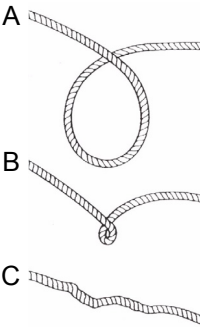
3. Beware of the danger zone. The danger zone is the area of the rotating wire cable drum, the fairlead (if fitted), the cable, the hook and the motor. Before placing hands in or near the danger zone, first relieve tension on load, then disconnect the control switch.



4. If you are within four feet of the winch, do not hold the cable and the remote (if equipped) at the same time.

Winch Cable Care

1. The life of a cable is directly related to the care it receives. The wire cable on a new winch (and any replacement cables) must be re-spooled under a minimum of a 100-lb. (45.4-kg) load before use. Failure to do this will result in cable damage.
2. Inspect all cable before use. Mashed, pinched, frayed or kinked areas severely reduce the load-carrying capability. Replace damaged cable promptly.
3. Prevent kinks before they occur.
   A. This is a start of a kink. Straighten the cable before using it.
   B. The cable was pulled and the loop has tightened to a kink. The cable is now permanently damaged and should not be used.
   C. The result of kinking is that each strand pulls a different amount of load, causing the strands under the greatest tension to break. This reduces the load capacity of the entire cable.



4. Before re-spooling, remove all load from the cable. Hold the handlebar switch lead in one hand and the cable in the other. Move away from the vehicle as far as the switch will allow. Activate the switch, walk in several feet of cable, then release the switch. Repeat this process until the re-spooling is complete.

CAUTION! To avoid injury, always release the switch before your hand comes within four feet of the fairlead (the physical opening through which the cable passes).

5. Be sure the cable is distributed evenly and tightly on the drum. A loosely wound drum may allow the cable to work its way down into the layers of cable on the drum and become wedged.
6. Do not grease or oil the cable. Doing so causes dirt contamination that will reduce the life of the cable.

WINCH GUIDE
Winch Preparation and Inspection

⚠ DANGER

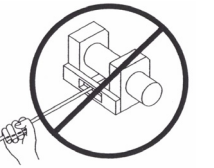
Wear heavy leather gloves whenever handling cable. Do not allow the cable to slip through your hands, even with gloves on. When handling the hook, always use a handsaver. Never place fingers into the hook. Placing fingers in the hook could result in injury.

⚠ WARNING

Inspect the switch and wiring for cracks, pinched spots, frayed wire or loose connections. A damaged, shortened lead could cause the winch to operate as soon as it is plugged in.

⚠ DANGER

Never touch the cable or hook while they are in tension or under load. Even at rest, the winch may have the cable in tension. Never guide a cable under tension onto the drum with your hand.



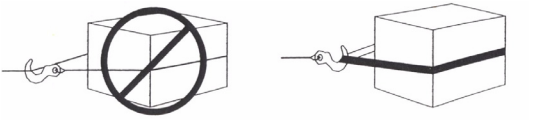
1. Winch with at least five wraps of cable around the winch drum. With fewer wraps, the cable could pull loose from the drum under load.

Winch Rigging

⚠ WARNING

Take your time when rigging and use extra caution. Improper rigging can result in injury in addition to damage to the vehicle and equipment. Never handle the cable or rigging while another person is at the control switch.

1. Use a nylon sling to attach the cable to an anchor point.

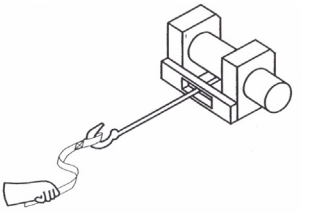


CAUTION! Do not attach the hook back onto the cable. Doing so can cause the cable to break.

⚠ WARNING

Always use a handsaver. Do not hold the hook with your hand. This is important not only when reeling cable in but also when removing cable from the winch under power.

2. Run the winch intermittently to take up cable slack. When using a pulley block, be sure the cable is running properly in all pulleys before applying a load.



CAUTION! Never engage or disengage the clutch if the winch is under load, the cable is in tension or the drum is rotating.

WINCH GUIDE
Winch Operation

NOTICE: This winch is designed for intermittent use. Prolonged use may result in damage due to overheating.

1. Use common sense.
2. Take your time.
3. Think through the situation.
4. Pay attention to what is going on when you are winching.
5. DO NOT overheat the winch motor. During extended winching, stop and feel the winch motor. The motor should be cool enough to touch. If not, allow the motor to cool before continuing.
6. Extended winching will discharge your battery. If the low battery warning light comes on, stop winching. Make sure the transmission is in neutral or park, then rev the motor for a few minutes until the warning light goes out. Recharge the battery as soon as possible.
7. DO NOT overload or stall the winch. If the load is greater than the winch is capable of pulling, use a snatch block.
8. Avoid continuous side pulls.
9. Never tow the vehicle by the winch cable.
10. Never use the winch cable as a tie-down.
11. Use an anchor point that is stronger than what you are pulling.
12. DO NOT hook the cable back onto itself. This will damage the cable.

Winch Operation

13. Use as much cable as possible when pulling. Additional wraps of cable on the spool will significantly reduce the pulling power of your winch. If the winch is still not capable of pulling the load, use a snatch block.
14. Never pull with less than five wraps of cable on the spool.
15. Inspect the condition of the cable prior to pulling. If the cable is frayed or damaged, replace it as soon as possible.
16. DO NOT submerge the winch in water.

EMISSION CONTROL SYSTEMS

Noise Emission Control System

Do not modify the engine, intake or exhaust components, as doing so may affect compliance with governmental noise level requirements.

Spark Arrester

Your POLARIS vehicle has a spark arrester that was designed for on-road and off-road operation. It is required that this spark arrester remain installed and functional when the vehicle is operated.

Exhaust Emission Control System

The emissions from the exhaust of this vehicle are controlled by engine design, including factory-set fuel delivery and ignition. The engine and related components must be maintained at POLARIS specifications to achieve optimal performance.

Engine idle speed is the only adjustment POLARIS recommends that the operator perform. Any other adjustments should be performed by an authorized POLARIS dealer.

Electromagnetic Interference

This vehicle complies with the EMC requirements of European directives 97/24/EC and 2004/108/EC.

Non-ionizing Radiation: This vehicle emits some electromagnetic energy. People with active or non-active implantable medical devices (such as heart monitoring or controlling devices) should review the limitations of their device and the applicable electromagnetic standards and directives that apply to this vehicle.

European Vibration and Noise

The driver-perceived noise and hand/arm and whole body vibration levels of this machinery is measured per prEN 15997.

The operating conditions of the machinery during testing:

The vehicles were in like-new condition. The environment was controlled as indicated by the test procedure(s).

The uncertainty of vibration exposure measurement is dependent on many factors, including:

- Instrument and calibration uncertainty
- Variations in the machine such as wear of components
- Variation of machine operators such as experience or physique
- Ability of the worker to reproduce typical work during measurements
- Environmental factors such as ambient noise or temperature

Periodic Maintenance Chart

Maintenance intervals in the following chart are based upon average riding conditions. Vehicles subjected to severe use must be inspected and serviced more frequently.

The programmable service interval mode on the instrument cluster will help determine when maintenance service is due. See page 45.

Record maintenance and service in the Maintenance Log beginning on page 131.

Service and adjustments are important for proper vehicle operation. If you're not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

Severe Use Definition

- Frequent immersion in mud, water or sand
- Racing or race-style high RPM use
- Prolonged low speed, heavy load operation
- Extended idle
- Short trip cold weather operation

Pay special attention to the oil level. A rise in oil level during cold weather can indicate contaminants collecting in the oil sump or crankcase. Change oil immediately if the oil level begins to rise. Monitor the oil level, and if it continues to rise, discontinue use and determine the cause or see your dealer.

MAINTENANCE
Periodic Maintenance Chart

⚠ WARNING

Improperly performing the procedures marked with a ■ could result in component failure and cause an accident, which may result in serious injury or death. Always have an authorized POLARIS dealer perform these services.

Maintenance Chart Key

▶ Perform these operations more often for vehicles subjected to severe use.

E Emission-related service (Failure to conduct this maintenance will not void the emissions warranty but may affect emissions.)

■ Have an authorized POLARIS dealer perform these services.

Periodic Maintenance Chart

Perform all services at whichever maintenance interval is reached first.

	Item	Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Kilometers	
	Steering	-	Pre-Ride	-	Make adjustments as need ed. See Pre-Ride Checklist on page 53.
	Front suspension	-	Pre-Ride	-	
	Rear suspension	-	Pre-Ride	-	
	Tires	-	Pre-Ride	-	
	Brake fluid level	-	Pre-Ride	-	
	Brake lever	-	Pre-Ride	-	
	Foot brake	-	Pre-Ride		
	Brake system	-	Pre-Ride	-	
	Wheels/fasteners	-	Pre-Ride	-	
	Frame fasteners	-	Pre-Ride	-	
▶	Engine oil level	-	Pre-Ride	-	
	Winch	-	Pre-Ride	-	See pages 57-58.
▶ E	Air filter, pre-filter	-	Daily	-	Inspect; clean often; replace as needed
▶	Air box sediment tube	-	Daily	-	Drain deposits when visible
	Coolant	-	Daily	-	Check level daily, change coolant every 2 years
	Headlight/taillight	-	Daily	-	Check operation; apply dielectric grease if replacing
▶ E	Air filter, main element	-	Weekly	-	Inspect; replace as needed
	Recoil housing (if equipped)	-	Weekly	-	Drain water as needed, check often if operating in wet conditions
▶ ■	Brake pad wear	10	Monthly	160	Inspect periodically
	Battery	20	Monthly	300	Check terminals; clean; test
▶	Demand drive fluid (front gearcase)	25	Monthly	400	Inspect level; change yearly
▶	Rear gearcase oil (if equipped)	25	Monthly	400	Inspect level; change yearly
▶	Transmission oil	25	Monthly	400	Inspect level; change yearly
▶ E	Engine breather filter (if equipped)	25	Monthly	400	Inspect; clean if needed

▶ Perform these procedures more often for vehicles subjected to severe use.
E Emission-Related Service
■ Have an authorized POLARIS dealer perform these services.

MAINTENANCE
Periodic Maintenance Chart

Item		Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Kilometers	
▶	Engine oil change (break-in)	-	1 M	-	Perform a break-in oil change at one month
▶	General lubrication	50	3 M	800	Lubricate all fittings, pivots, cables, etc.
	Shift linkage	50	6 M	800	Inspect, lubricate, adjust
■	Steering	50	6 M	800	Lubricate
▶	Front suspension	50	6 M	800	Lubricate
▶	Rear suspension	50	6 M	800	Lubricate
	Carburetor float bowl	50	6 M	800	Drain bowl periodically and prior to storage
■ E	Throttle Cable/ ETC Switch	50	6 M	800	Inspect; adjust; lubricate; replace if necessary
■ E	Choke cable	50	6 M	800	Inspect; adjust; lubricate; replace if necessary
E	Carburetor air intake ducts/flange	50	6 M	800	Inspect duct for proper sealing/air leaks
	Drive belt	50	6 M	800	Inspect; adjust; replace as needed
	Cooling system	50	6 M	800	Inspect coolant strength seasonally; pressure test system yearly
▶	Engine oil change	100	6 M	1600	Perform a break-in oil change at one month
▶	Oil filter change	100	6 M	1600	Replace with oil change
▶	Oil tank vent hose (if equipped)	100	6 M	1600	Inspect routing, condition
■ E	Valve clearance	100	12 M	1600	Inspect; adjust
■ E	Fuel system	100	12 M	1600	Check for leaks at tank cap, lines, fuel valve, filter, pump, carburetor; replace lines every two years
▶ ■ E	Fuel filter	100	12 M	1600	Replace annually
▶	Radiator	100	12 M	1600	Inspect; clean external surfaces
▶	Cooling hoses	100	12 M	1600	Inspect for leaks
▶	Engine mounts	100	12 M	1600	Inspect
	Exhaust muffler/ pipe	100	12 M	1600	Inspect

Periodic Maintenance Chart

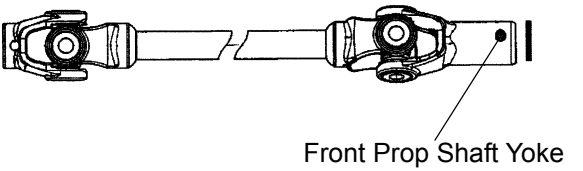
	Item	Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Kilometers	
■ E	Spark plug	100	12 M	1600	Inspect; replace as needed
▶	Wiring	100	12 M	1600	Inspect for wear, routing, security; apply dielectric grease to connectors subjected to water, mud, etc.
■	Clutches (drive and driven)	100	12 M	1600	Inspect; clean; replace worn parts
■	Front wheel bearings	100	12 M	1600	Inspect; replace as needed
■	Brake fluid	200	24 M	3200	Change every two years
	Spark arrester	300	36 M	4800	Clean out
■	Toe adjustment	-			Inspect periodically; adjust when parts are replaced
■	Brakes	-			Inspect daily; adjust as needed
	Headlight aim	-			Adjust as needed

▶ Perform these procedures more often for vehicles subjected to severe use.
E Emission-Related Service
■ Have an authorized POLARIS dealer perform these services.

MAINTENANCE
Lubrication Guide

Always check and change fluids and lubricate greaseable components at the intervals outlined in the Periodic Maintenance Chart beginning on page 63. Items not listed in the chart should be lubricated at the General Lubrication interval.

Item	Lube	Method
Engine Oil	PS-4 PLUS Performance Synthetic 2W-50	See page 69.
Brake Fluid	DOT 4 Only	See page 82.
Transmission Oil	AGL PLUS Transmission Fluid	See page 75.
Front Demand Drive Unit (Front Gearcase)	Demand Drive Plus Fluid	See page 77.
Front Prop Shaft Yoke	POLARIS Premium U-Joint Lube	Grease fittings (3 pumps maximum) every 800 km, before long periods of storage, or after pressure washing or submerging.



Engine Oil

Oil Recommendations

Always change the oil filter whenever changing oil.

POLARIS recommends the use of POLARIS PS-4 *PLUS Performance* Synthetic 2W-50 4-cycle oil or a similar oil for this engine. Oil may need to be changed more frequently if POLARIS oil is not used. Always use 2W-50 oil. Follow the manufacturer's recommendations for ambient temperature operation. See page 122 for the part numbers of POLARIS products.

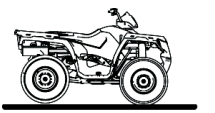
Mixing brands or using a non-recommended oil may cause serious engine damage. Always use a recommended oil. Never substitute or mix oil brands.

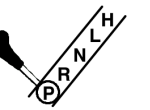
Oil Specifications

Model	Lubricant	Capacity	Drain Plug Torque
SPORTSMAN Forest 500	PS-4 PLUS Performance Synthetic 2W-50 4-Cycle Oil	1.9 liters	19-23 N-m

MAINTENANCE
Engine Oil
Oil Level

1. Position the vehicle on a level surface.
2. Place the transmission in PARK.





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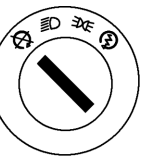
3. Start the engine. Allow it to idle for 30 seconds.
4. Stop the engine.



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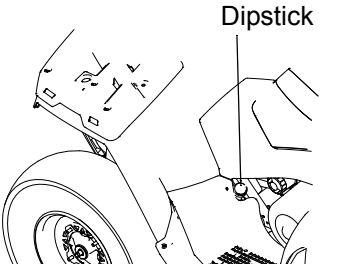
5. Remove the dipstick. Wipe it dry with a clean cloth.
6. Reinstall the dipstick completely.



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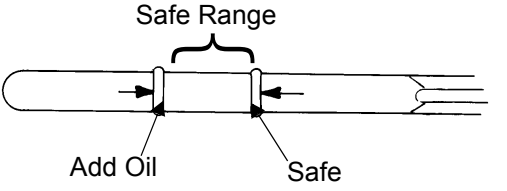
7. Remove the dipstick and check the oil level. Add oil as needed. Maintain the oil level in the safe range. Do not overfill.



8. Reinstall the dipstick.

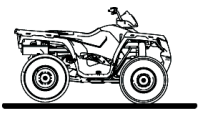
Engine Oil

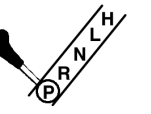
Oil Change

⚠

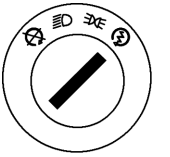
Hot oil may result in serious burns. Do not allow hot oil to contact skin.

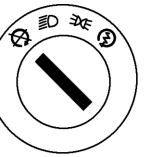
1. Position the vehicle on a level surface.
2. Place the transmission in PARK.



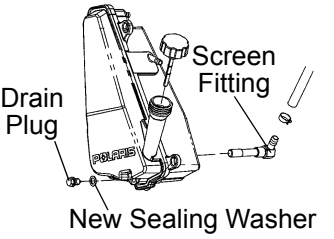


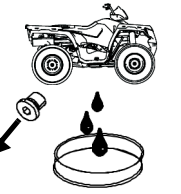
3. Start the engine. Allow it to idle for two minutes.
4. Stop the engine.



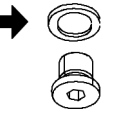


5. Clean the area around the drain plug.
6. Place a drain pan under the oil tank.
7. Remove the drain plug.
8. Drain the oil.



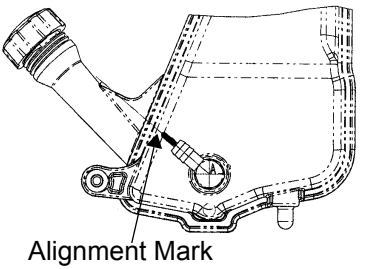


9. Clean the drain plug. Reinstall the drain plug with a new sealing washer.
10. Torque to specification. See page 69.



MAINTENANCE
Engine Oil
Oil Change

11. Disconnect the lower oil delivery hose and remove the screen fitting from the oil tank. Clean the fitting. *The fitting threads must be sealed with LOCTITE PST 505 or PTFE seal tape.*
12. Reinstall the screen fitting and rotate the fitting clockwise a minimum of 2 1/2 turns into the tank threads. Continue to rotate the fitting until the nipple of the fitting aligns with the mark on the tank.



Tip: Do not over-tighten. Maximum torque for the screen fitting is 34 N-m.

13. Reattach the oil line.

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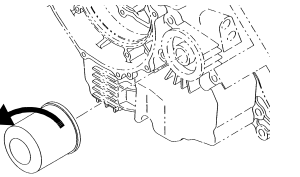
14. Place towels under the oil filter. Using an oil filter wrench, turn the filter counter-clockwise to remove it.
15. Clean the filter sealing area on the crankcase.



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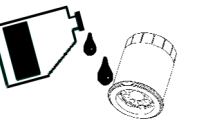
16. Lubricate the filter o-ring. Check to make sure the o-ring is in good condition.
17. Install the new oil filter. After the filter contacts the crankcase surface, turn it 1/2 turn by hand.



18. Approximately 240 ml of engine oil will remain in the crankcase. To drain, remove the drain plug on the lower right side of the crankcase.

Tip: The sealing surfaces on the drain plug and crankcase should be clean and free of burrs, nicks or scratches.

19. Reinstall the drain plug. Torque to specification.

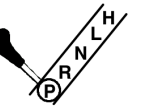
Engine Oil

Oil Change

20. Remove the dipstick.
21. Add 1.9 liters of recommended oil. If the sump is not drained, add about 1.6 liters initially.
22. Reinstall the dipstick.

---

23. Place the transmission in PARK.
24. **Prime the oil pump using the procedure on page 74.**
25. Stop the engine. Check for oil leaks.



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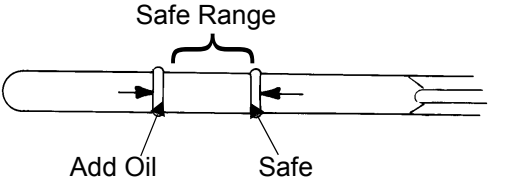
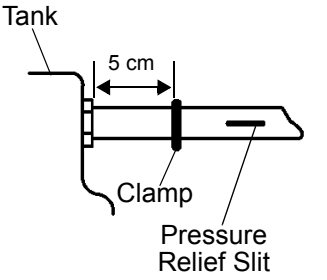
26. Check the oil level. Add oil as needed. Maintain the oil level in the safe range. Do not overfill.
27. Reinstall the dipstick.
28. Discard used oil and filter properly.



MAINTENANCE
Engine Oil
Oil Change
Oil Pump Priming

This priming procedure must be performed whenever the oil hose connection between the oil tank and pump inlet has been disconnected.



1. Clamp the vent line 5 cm from the oil tank, between the end of the oil tank vent fitting and the vent line's pressure relief slit.
2. Start the engine. Allow it to idle for 10-20 seconds.
3. Remove the vent line clamp. If the line is bled properly, you should hear a rush of air. If you do not hear a rush of air, repeat the priming procedure.

Transmission Oil

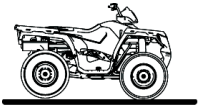
Maintain the oil level at the bottom of the fill plug hole threads. Use the recommended oil. See page 122 for the part numbers of POLARIS products.

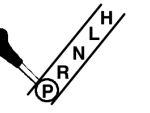
Oil Recommendations

Lubricant	Oil Change Capacity	Fill Plug Torque	Drain Plug Torque
AGL PLUS Transmission Fluid	948 ml	27-34 N-m	27-34 N-m

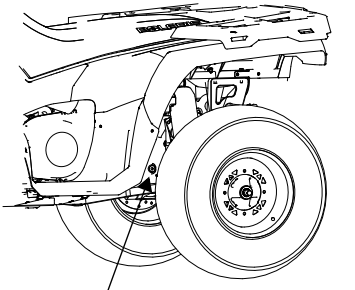
Oil Level

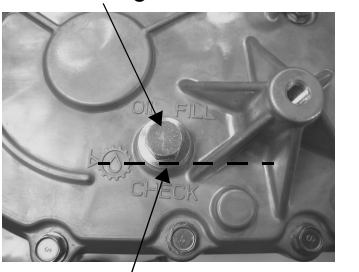
1. Position the vehicle on a level surface.
2. Place the transmission in PARK.





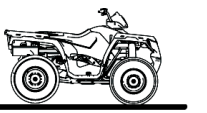
3. Remove the fill plug.
4. Check the oil level. Maintain the level at the bottom of the fill hole threads.
5. Add the recommended oil as needed. Do not overfill.
6. Reinstall the fill plug. Torque to specification.

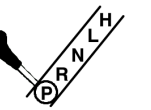




MAINTENANCE
Transmission Oil
Oil Change

1. Position the vehicle on a level surface.
2. Place the transmission in PARK.





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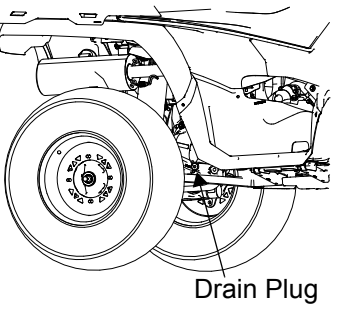
3. Remove the fill plug.
4. Remove the drain plug.
5. Drain the oil into a drain pan.
6. Clean the drain plug.
7. Reinstall the drain plug. Torque to specification. See page 75.
8. Add the recommended oil.
9. Reinstall the fill plug. Torque to specification.
10. Check for leaks.
11. Discard used oil properly.



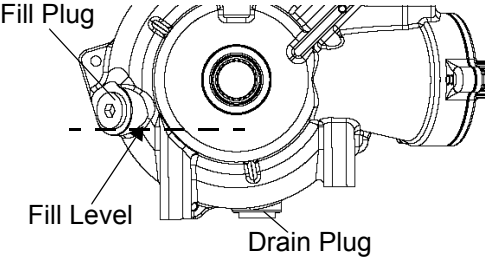
Front Gearcase (Demand Drive) Fluid

Fluid Recommendations

Gearcase	Lubricant	Capacity	Fill Plug Torque	Drain Plug Torque
Demand Drive Unit	Demand Drive Plus Fluid	265 ml	11-14 N-m	15 N-m

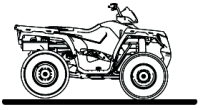
Use the recommended fluid. Use of other fluids may result in improper operation of components. See page 122 for the part numbers of POLARIS products.

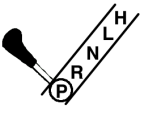
Maintain the fluid level at the bottom of the fill hole threads.



Fluid Level

1. Position the vehicle on a level surface.
2. Place the transmission in PARK.

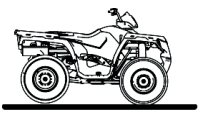


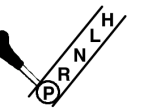


3. Remove the fill plug.
4. Add the recommended demand drive fluid as needed.
5. Reinstall the fill plug. Torque to specification.

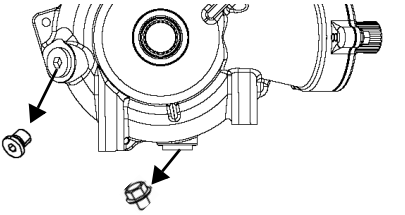
MAINTENANCE
Front Gearcase (Demand Drive) Fluid
Fluid Change

1. Position the vehicle on a level surface.
2. Place the transmission in PARK.

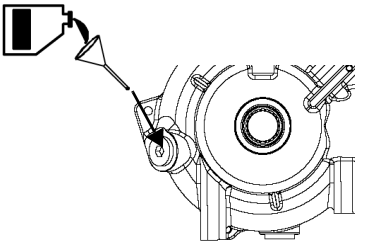




3. Remove the fill plug.
4. Remove the drain plug. Drain the fluid into a drain pan.



5. Clean the drain plug.
6. Reinstall the drain plug. Torque to specification. See page 77.
7. Add the recommended fluid.
8. Reinstall the fill plug. Torque to specification.
9. Check for leaks.
10. Discard used oil properly.



Carburetor

This vehicle is calibrated at the factory for optimal performance at altitudes ranging from zero to 6,000 feet (1800 m) and temperatures of +40 degrees F. (4 degrees C.) or higher. Above 6000 feet (1800 m) the engine air/fuel mixture becomes overly rich and the engine loses approximately 3% of its power for each 1000-foot (304.8 m) increase in elevation. Although this power cannot be regained, adjustments to the carburetor and drive system can be made to allow more efficient operation. Optional jets, available from your POLARIS dealer, are required for operation above 6,000 feet and temperatures below +40 degrees F. (4 degrees C.)

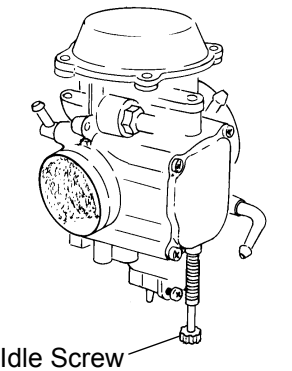
Continuous operation of the engine without proper jetting when required can cause poor performance, overheating or PVT or engine damage. See your POLARIS dealer for more information about jetting the ATV for conditions in your area.

Pilot screws are sealed with metal plugs and are serviceable only by POLARIS dealers.

Carburetor/Engine Idle RPM Adjustment

Recommended engine idle RPM is 1200 +/- 200. If the engine idle speed is unsatisfactory and all other conditions are favorable, the carburetor can be adjusted.

1. Start the engine and allow it to warm up for approximately five minutes.
2. Place the transmission in gear.
3. Lock the parking brake.
4. Turn the screw in (clockwise) to raise RPM. Turn the screw out (counter-clockwise) to lower RPM.



MAINTENANCE
Cooling System

Any time the cooling system has been drained for maintenance or repair, replace the coolant with a fresh mixture of antifreeze and water. Drain the cooling system every two years. Add fresh coolant.

POLARIS recommends the use of POLARIS Premium 60/40 anti-freeze/coolant or a 50/50 mixture of high quality aluminum compatible anti-freeze/coolant and distilled water. POLARIS Premium 60/40 is pre-mixed and ready to use. Do not dilute with water. See page 122 for the part numbers of POLARIS products.

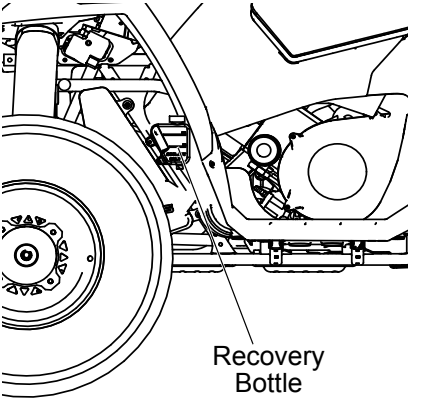
Always follow the manufacturer's mixing recommendations for the freeze protection required in your area.

Recovery Bottle Coolant

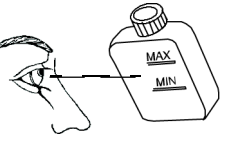
Some coolant level drop on new machines is normal, as the system is purging itself of trapped air. Add coolant as needed.

Tip: Check the coolant level in the radiator any time the recovery bottle has run dry.

1. Check the coolant level when the fluid is cool. Maintain the coolant level between the minimum and maximum marks on the bottle (when the fluid is cool).
2. Remove the left side panel. See page 88.



3. View the coolant level.
4. Add coolant as needed.
5. Reinstall the side panel.

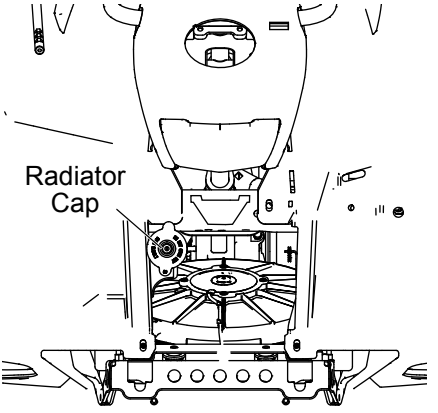


Cooling System

Radiator Coolant

⚠

Escaping steam can cause severe burns. Never remove the pressure cap while the engine is warm or hot.



1. Open the front box cover.
2. Remove the access panel screws. Squeeze the outer edges of the panel inward to remove the panel.
3. Remove the radiator pressure cap.
4. If coolant is not visible, slowly add coolant through the radiator filler neck.
5. Reinstall the pressure cap. Use of a non-standard pressure cap will not allow the recovery system to function properly. Contact your dealer for the correct replacement part.
6. Reinstall the access panel and secure the front box cover.

MAINTENANCE
Brake Fluid

Check brake fluid levels for both brake systems before each ride. Always maintain brake fluid at the recommended level. Do not overfill.

The brakes should feel firm when they're applied. Spongy or weak brakes may indicate a fluid leak or low fluid level. A low fluid level may also mean that brake pads are worn and need to be replaced. Do not operate the vehicle with spongy or weak brakes. See your dealer for service.

⚠

Operating the vehicle with a spongy brake can result in loss of braking, which could cause an accident. Never operate the vehicle with spongy-feeling brakes.

If the fluid level is low add DOT 4 brake fluid only. See page 122 for the part numbers of POLARIS products.

⚠

An over-full master cylinder may cause brake drag or brake lock-up, which could result in serious injury or death. Maintain brake fluid at the recommended level. Do not overfill.

Under normal operation, the diaphragm extends into the reservoir as fluid level drops. If the fluid level is low and the diaphragm is not extended, a leak is likely and the diaphragm should be replaced. To ensure proper diaphragm operation, always fill the reservoir as needed whenever the cover is loosened or removed. Do not overfill.

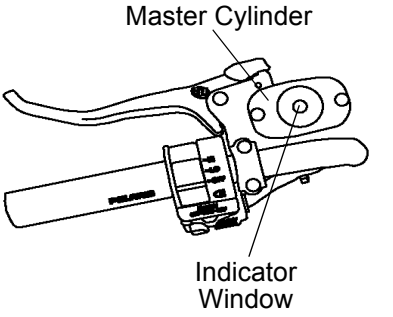
⚠

Never store or use a partial bottle of brake fluid. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the air. The moisture causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the possibility of accident or severe injury. After opening a bottle of brake fluid, always discard any unused portion.

Brake Fluid

Hand Brake

The master cylinder is located on the left handlebar. Maintain the fluid level 6 mm below the top edge of the master cylinder. Do not overfill.



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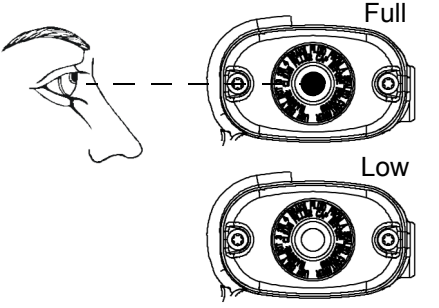
1. Position the vehicle on a level surface. Make sure the handlebars are straight.
2. View the fluid level through the indicator window (eye) on the top of the master cylinder.

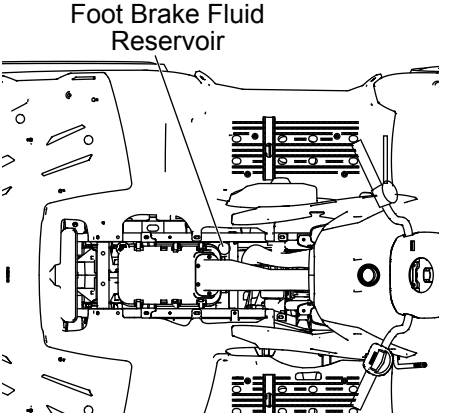
Tip: The eye will appear dark when the fluid level is full. When fluid is low, the eye will be clear.

3. Add the recommended fluid as needed. Do not overfill.



MAINTENANCE
Brake Fluid
Foot Brake

1. Position the vehicle on a level surface.
2. Remove the seat.
3. View the fluid level in the master cylinder.
4. Maintain the fluid level between the minimum and maximum marks. Do not overfill.



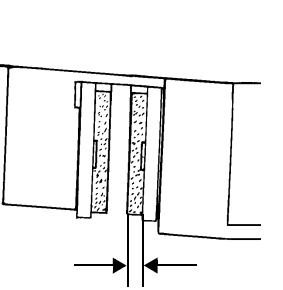
Brakes

The front and rear brakes are hydraulic disc brakes, activated by applying the foot brake. The handlebar brake is also hydraulic. Both brake systems are self-adjusting.

Brake Inspections

Perform the following checks to keep the brake systems in good operating condition. Check more often if brakes are used heavily under normal operation.

1. Always keep brake fluid at an adequate level. See page 82.
2. Check the brake systems regularly for fluid leaks.
3. Check the brakes for excessive travel or spongy feel.
4. Check the friction pads for wear, damage and looseness. Replace the pads when the friction material is worn to 1 mm.
5. Check the security and surface condition of the disc.



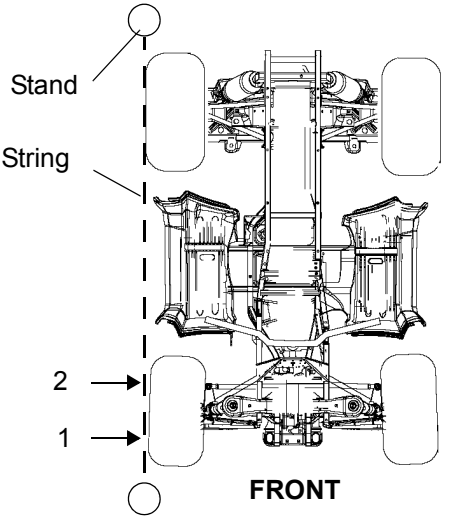
MAINTENANCE
Toe Alignment

⚠

Do not attempt to adjust tie rod alignment. All tie rod adjustments should be performed by an authorized POLARIS dealer.

Use the following procedure to check the toe alignment of the vehicle. The recommended toe alignment is 3-6 mm toe out.

1. Position the vehicle on a level surface.
2. Place the handlebars in a straight-ahead position.
3. Tie a length of string between two stands as shown in the illustration. Position the stands so that the string is flush with the side of the rear tire. If available, you may use a long straight-edge instead of string.
4. Measure the distance from the string to the rim at the front (1) and rear (2) of the front rim. The rear measurement should be 2-3 mm more than the front measurement on each side of the vehicle to obtain the recommended 3-6 mm toe out alignment.



5. Repeat the measurement procedure on the other side of the vehicle.
6. If you discover improper alignment, see your POLARIS dealer for service.

Steering Assembly

Check the steering assembly of the vehicle periodically for loose nuts and bolts. If loose nuts and bolts are found, see your POLARIS dealer for service before operating the vehicle.

Handlebar Adjustment

The handlebars can be adjusted for rider preference.

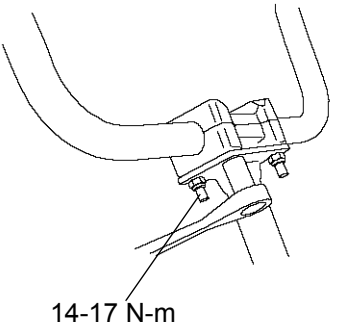
⚠

Improper adjustment of the handlebars or incorrect torquing of the adjuster block tightening bolts can cause limited steering or loosening of the handlebars, resulting in loss of control. Follow the adjustment procedures exactly, or see your POLARIS dealer for service.

1. Remove the upper headlight pod.
2. Loosen the four handlebar bolts.
3. Adjust the handlebar to the desired height.

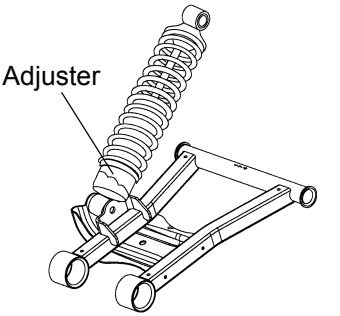
Tip: Be sure the handlebars do not contact the gas tank or any other part of the machine when turned fully to the left or right.

4. Torque the front two bolts to 14-17 N-m, then torque the rear two bolts. A gap of up to 3 mm will remain at the rear bolts.



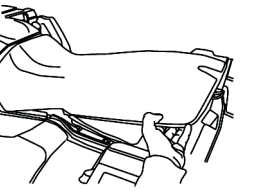
Rear Spring Adjustment

The rear shock absorber spring is adjusted by rotating the adjuster either clockwise or counter-clockwise to increase or decrease spring tension.

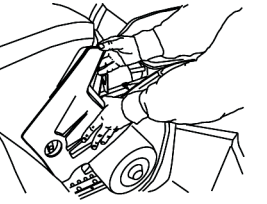


MAINTENANCE
Side Panel Removal

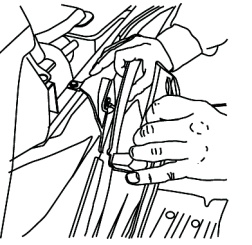
1. Remove the seat.



2. Grasp the rear of the side panel near the rear cab.

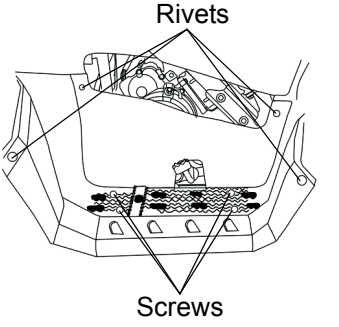


3. With a firm motion, pull the panel outward to disengage the side panel from the grommet.
4. Pull the panel downward and rearward to remove it.



Footwell Removal

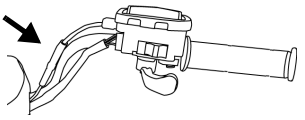
1. Remove the four screws on the bottom of the footwell.
2. Use a flat screwdriver or sidecutters to remove the plastic rivets securing the footwell to the fenders.
3. Remove the footwell.



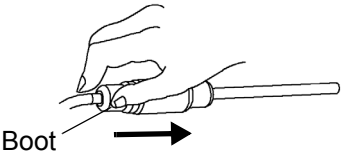
Throttle Cable Freeplay

Adjust throttle cable freeplay at the handlebar.

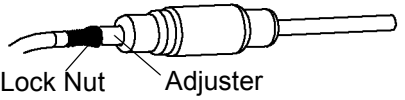
1. Locate the throttle cable adjuster at the handlebar.



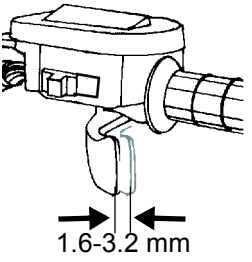
2. Squeeze the end of the rubber boot and slide it far enough to expose the end of the inline cable adjuster.



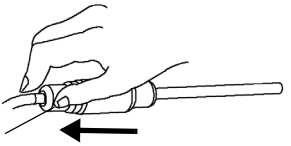
3. Loosen the adjuster lock nut.



4. Rotate the boot to turn the adjuster until 1.6-3.2 mm of freeplay is achieved at the thumb lever. Move the throttle lever back and forth while adjusting.



5. Tighten the lock nut.
6. Squeeze the end of the rubber boot and slide it over the cable adjuster to its original position.



WARNING! Engine RPM should not increase when steering is turned full left or right. Readjust cable freeplay if this occurs.

MAINTENANCE
Tires

⚠ WARNING

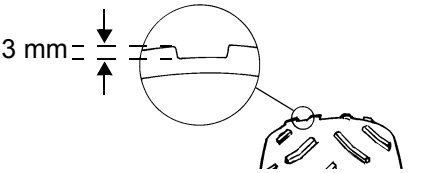
Operating your vehicle with worn tires, improperly inflated tires, non-standard tires or improperly installed tires will affect vehicle handling and could cause an accident.

- Maintain proper tire pressure as described on the label on your vehicle and in the specifications section of the owner's manual.
- Use only original equipment size and type when replacing tires.
- Make sure the wheels are installed properly.
- Replace tires when the tread depth measures 3 mm or less.

Refer to the specifications section beginning on page 120 for recommended tire type, size and pressure.

Tire Tread Depth

Always replace tires when tread depth is worn to 3 mm or less.

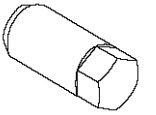


Front Wheel Hub Tightening

Front wheel bearing tightness and spindle nut retention are critical component operations. All service must be performed by your authorized POLARIS dealer.

Wheel Nut Torque Specifications

Check the wheel nut torques occasionally and when they've been loosened for maintenance service.

Nut Type	Nut Torque
Lug Nut (Aluminum Wheels) 	41 N-m PLUS 1/4 TURN
2-Piece Flange Nut (Steel Wheels)	37 N-m

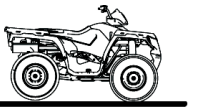
Tires

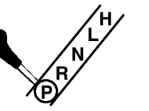
Wheel Removal/Installation

⚠

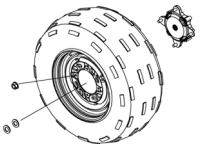
Always use original equipment size and type when replacing tires. Install wheels properly.

1. Position the vehicle on a level surface.
2. Place the transmission in PARK.

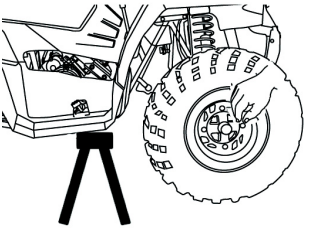




3. Loosen the wheel nuts slightly.
4. Place a suitable stand under the footrest frame to raise the wheel slightly off the ground.
5. Remove the wheel nuts.
6. Remove the wheel.



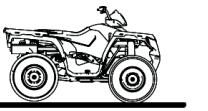
7. Place the wheel on the hub.
8. Install the wheel nuts finger tight.
9. Lower the vehicle to the ground.
10. Torque the wheel nuts to specification. See torque chart on page 90.

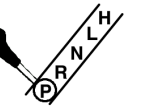


MAINTENANCE
Air Filter

Always clean and replace the air and breather filters at the intervals outlined in the Periodic Maintenance Chart beginning on page 63.

1. Position the vehicle on a level surface.
2. Place the transmission in PARK.





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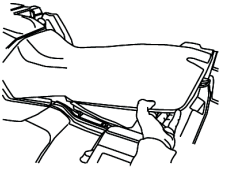
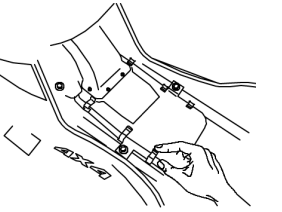
3. Remove the seat.
4. Release the air box cover clips.
5. Remove the air box cover.





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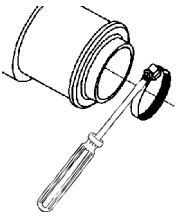
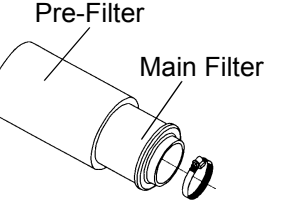
6. Loosen the hose clamp.
7. Remove the filter.
8. Remove the pre-filter from the filter.





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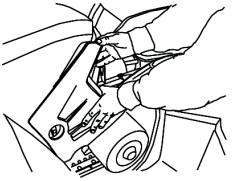
9. Wash the pre-filter in soapy water. Rinse and air dry.
10. Replace the filter if needed.
11. Reverse the steps to reinstall all components.

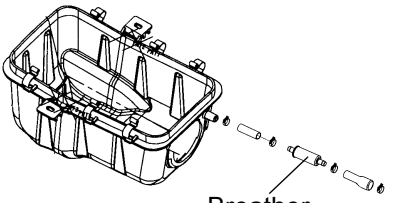
Breather Filter/Hose

The breather filter is on the hose between the engine and air box.

1. Remove the left side panel. See page 88.



2. Remove the hose clamps from the filter and pull the filter out of the hoses.
3. Inspect the filter for debris. Blow gently through the filter in the direction of the arrow to check for clogging. Replace a damaged or clogged filter.



4. Check the hoses for cracks, deterioration, abrasion, or leaks. Replace as needed.
5. Reinstall the filter and hose clamps.

Tip: The filter is effective with the arrow pointing in either direction.

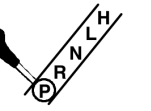
⚠

Operation of your vehicle without a breather filter can cause engine damage.

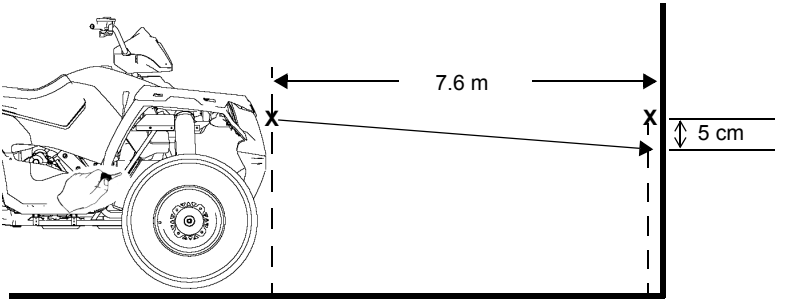
MAINTENANCE
Lights
Headlight Beam Adjustment

The headlight beam can be adjusted slightly upward or downward.

1. Position the vehicle on a level surface. The headlight should be approximately 7.6 m from a wall.
2. Place the transmission in PARK.



3. Measure the distance from the floor to the center of the headlight and make a mark on the wall at the same height. Include rider weight on the seat when measuring.



4. Start the engine.Turn the headlight switch to high beam.
5. Observe the headlight aim on the wall. The most intense part of the headlight beam should be 5 cm below the mark on the wall.
6. Tighten or loosen the lower headlight screws to adjust the beam.

Lights

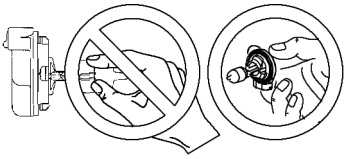
⚠

Poor lighting can result in loss of control or an accident. Lights become dirty during normal operation. Wash the headlights and taillights frequently.

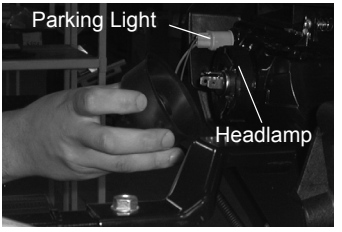
Hot components can cause serious burns to skin. Do not service the headlamps until they've cooled.

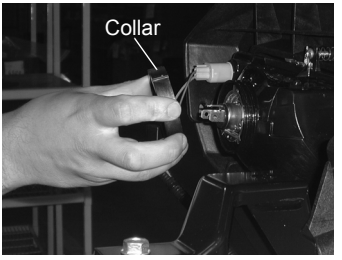
Headlight/Parking Light Lamp Replacement

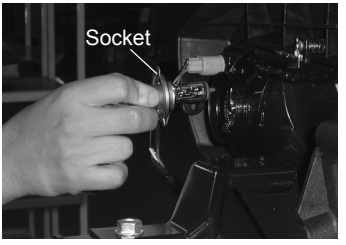
When servicing a halogen lamp, do not touch the lamp with bare fingers. Oil from your skin leaves a residue, causing a hot spot that will shorten the life of the lamp. Hold the plastic part of the lamp.



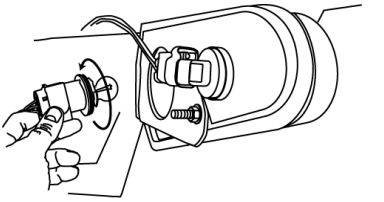
1. Place the transmission in PARK.
2. Reach under the front bumper area to locate the lighting connectors.
3. *Parking Light Lamp:* Disconnect the harness connector. Turn the socket counter-clockwise 1/8 turn and remove the lamp assembly. Pull the lamp straight out to remove it from the socket.
4. *Headlight Lamp:* Disconnect the harness connector. Remove the rubber cover from the back of the headlight. Press and turn the locking collar counter-clockwise (left headlight) or clockwise (right headlight) to release the lamp assembly.
5. Install the new lamp. Apply a small amount of dielectric grease to the lamp socket or terminals.
6. Reverse all steps to reassemble components.





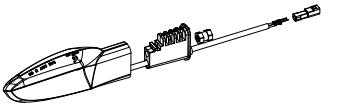


MAINTENANCE
Lights
Taillight Lamp Replacement



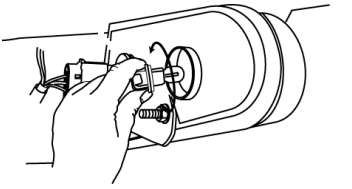
1. Place the transmission in PARK.
2. Rotate the taillight socket counter-clockwise to remove it.
3. Remove the lamp.
4. Apply dielectric grease to the socket.
5. Install the new lamp. Test the lamp for proper operation.
6. Reinstall all components in reverse order.

Front Turn Signal Replacement



If a front turn signal light becomes inoperable, the lamps cannot be replaced. Replace the entire signal lamp assembly.

Rear Turn Signal Lamp Replacement

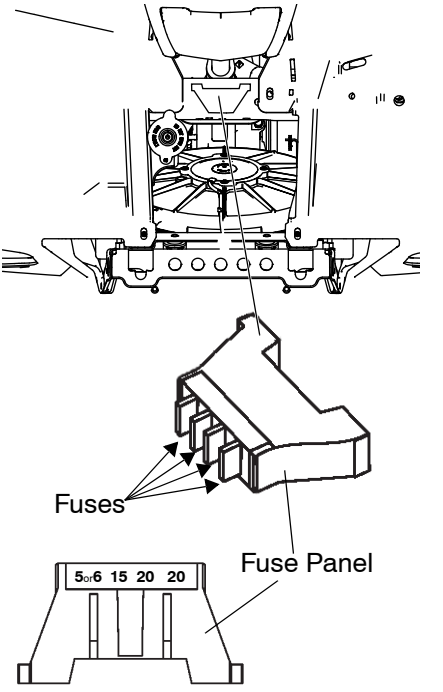


1. Place the transmission in PARK.
2. Rotate the turn signal socket counter-clockwise to remove it.
3. Remove the lamp.
4. Apply dielectric grease to the socket.
5. Install the new lamp. Test the lamp for proper operation.
6. Reinstall all components in reverse order.

Fuse Replacement

If the engine stops or will not start, or if you experience other electrical failures, a fuse may need replacement. Locate and correct any short circuits that may have caused the blown fuse, then replace the fuse. Spare fuses are provided in a compartment.

1. Open the front box cover.
2. Remove the suspect fuse from the fuse panel. If the fuse is blown, install a new fuse with the same amperage.
3. Secure the front box cover.



MAINTENANCE
Spark Plugs
Spark Plug Recommendations

Refer to the specifications section beginning on page 120 for the recommended spark plug type and gap for your vehicle. Torque spark plugs to specification.

Plug Condition	Torque Specification
New Spark Plug	12-15 N-m
Previously Installed Spark Plug	23-27 N-m

Spark Plug Inspection

Spark plug condition is indicative of engine operation. Check the spark plug firing end condition after the engine has been warmed up and the vehicle has been driven at higher speeds. Immediately check the spark plug for correct color. See page 99.

Normal Spark Plug

The normal insulator tip is tan or brown. There will be few combustion deposits. The electrodes are not burned or eroded. This indicates the proper type and heat range for the engine and the service.

The tip should not be white. A white insulator tip indicates overheating, caused by use of an improper spark plug or incorrect carburetor adjustments.

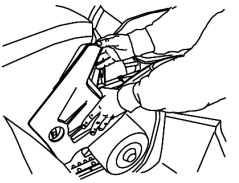
Wet Fouled Spark Plug

The wet fouled insulator tip is black. A damp oil film covers the firing end. There may be a carbon layer over the entire nose. Generally, the electrodes are not worn. General causes of fouling are excessive oil, use of non-recommended oil, improper use of the choke, or incorrect carburetor adjustments.

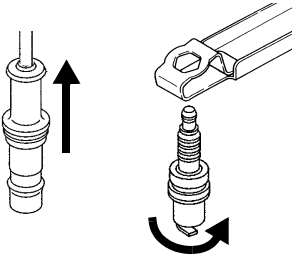
Spark Plugs

Spark Plug Removal

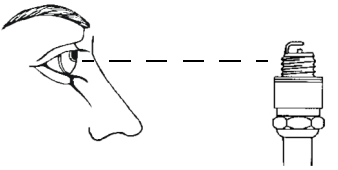
1. Remove the left side panel. See page 88.



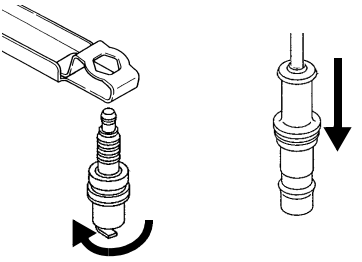
2. Remove the spark plug cap.
3. Use the spark plug wrench to remove the spark plug. Turn the plug counter-clockwise to remove it.



4. Inspect the electrodes for wear and carbon buildup. Replace worn or fouled plugs. Verify that the gap is at specification before installation.



5. Reinstall the spark plug. Torque to specification. See page 98.
6. Reinstall the spark plug cap.



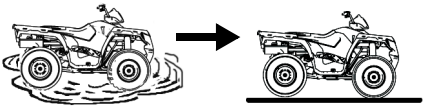
MAINTENANCE
Vehicle Immersion

If your vehicle has been totally submerged in water and it's impossible to have it serviced before further operation, perform the following procedure.

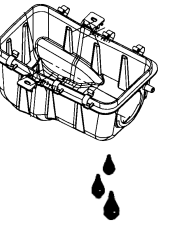
⚠

If the vehicle stops while fully submerged, major engine damage can result if the machine is not thoroughly inspected. Take the vehicle to your dealer before starting the engine.

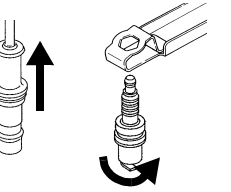
1. Move the vehicle out of the water.
2. Turn the fuel valve off.



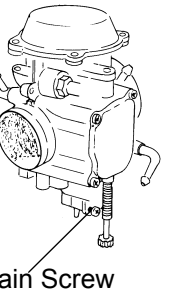
3. Drain any water found in the air box.



4. Remove the spark plug.

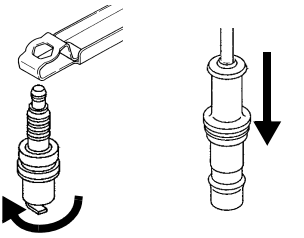


5. Loosen the carburetor drain screw and drain the carburetor.
6. Turn the engine over several times using the electric start.



Vehicle Immersion

7. Dry the spark plug. Reinstall the plug or install a new plug. Torque to specification. See page 98.
8. Tighten the carburetor drain screw.
9. Turn the fuel valve on.



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10. Attempt to start the engine. If necessary, repeat the drying procedure.
11. Have the vehicle serviced by your dealer promptly, whether you succeed in starting it or not.
12. If water has been ingested into the PVT, follow the procedure on page 105 for drying out the PVT.

MAINTENANCE
Spark Arrester

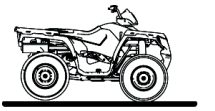
Occasionally, the spark arrester may accumulate carbon, which can restrict the exhaust if left unattended. Purge the spark arrester.

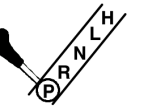
⚠

Allow components to cool sufficiently before servicing. The exhaust system can get extremely hot. Never run the engine in an enclosed area or indoors. Exhaust contains poisonous carbon monoxide gas. Never go under the vehicle while it's inclined.

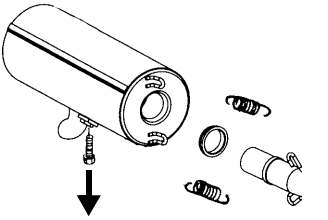
Remove any combustible materials from the area. Wear eye protection and leather work gloves. Do not stand behind or in front of the vehicle while purging.

1. Position the vehicle on a level surface.
2. Place the transmission in PARK.

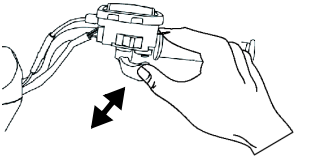




3. Remove the arrester clean-out plug from the bottom of the muffler.

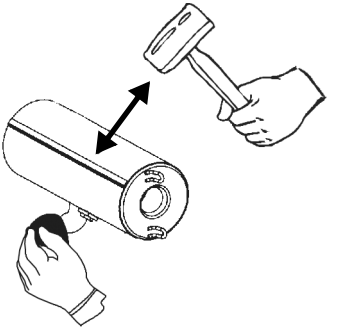


4. Start the engine.
5. Quickly squeeze and release the throttle lever several times to purge carbon from the system.

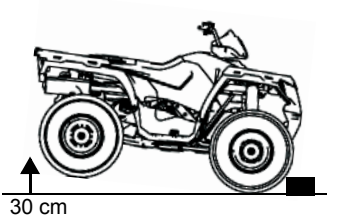


Spark Arrester

6. If carbon comes out of the exhaust, cover or plug the exhaust outlet. Wear protective gloves.
7. Lightly tap on the exhaust pipe with a rubber mallet while repeating step 5.



8. If particles are still suspected to be in the muffler, elevate the rear of the vehicle 30 cm higher than the front. Block the wheels.
9. Place the transmission in PARK. Repeat steps 5 to 7 until no more particles are expelled.



10. Stop the engine. Allow the arrester to cool.
11. Reinstall the arrester plug and remove the exhaust outlet cover or plug.

MAINTENANCE
PVT System

Do not modify any component of the PVT system. Doing so may reduce its strength so that a failure may occur at a high speed. The PVT system has been precision balanced. Any modification will cause the system to be out of balance, creating vibration and additional loads on components.

The PVT system rotates at high speeds, creating large amounts of force on clutch components. Extensive engineering and testing has been conducted to ensure the safety of this product. However, as the owner, you have the following responsibilities to make sure this system remains safe:

- Always follow all recommended maintenance procedures. Always look for and remove debris inside and around the clutch and vent system when replacing the belt.
- See your dealer as outlined in the owner's manual.
- This PVT system is intended for use on POLARIS products only. Do not install it in any other product.
- Always make sure the PVT housing is securely in place during operation.

PVT System

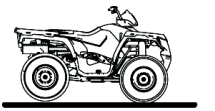
When To Use Low Range and High Range

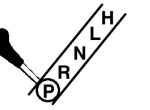
Condition	Range to Use
Operating at speeds less than 11 km/h	Low
Towing heavy loads	Low
Operating in rough terrain (swamps, mountains, etc.)	Low
Operating at speeds greater than 11 km/h	High

PVT Drying

There may be some instances when water is accidently ingested into the PVT system. Dry it out before operating.

1. Position the vehicle on a level surface.
2. Place the transmission in PARK.





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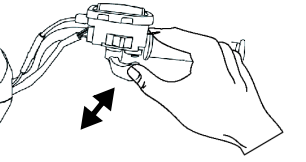
3. Remove the drain plug. Allow the water to drain completely. Reinstall the drain plug.
4. Start the engine.
5. Apply varying throttle for 10-15 seconds to expel the moisture and air-dry the belt and clutches. *Do not hold the throttle wide open for more than 10 seconds.*



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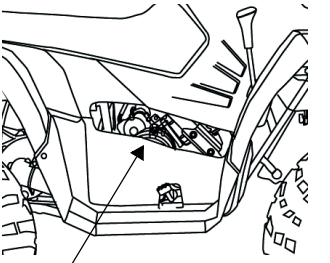
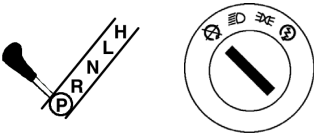
6. Allow the engine RPM to settle to idle speed, then shift the transmission to the lowest available range.
7. Test for belt slippage. If the belt slips, repeat the process.
8. Take the vehicle to your dealer for service as soon as possible.

MAINTENANCE
Recoil Housing (if equipped)

Always drain the recoil housing after operating the vehicle in wet conditions. Drain the housing before storing the vehicle. Make sure the housing is completely dry before reinstalling the drain plug.

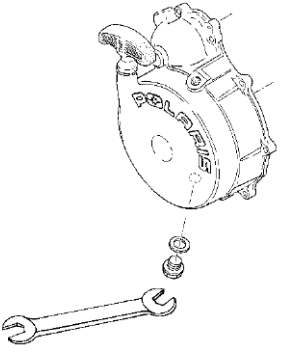


1. Place the transmission in PARK.
2. Stop the engine.



3. Remove the drain screw on the bottom of the recoil housing.
4. Allow the housing to drain completely.
5. Reinstall the drain screw.

Tip: Do not open the *crankcase* drain unless the engine has ingested water. On 4-cycle engines, some engine oil will be lost if the crankcase drain is opened.



Battery

⚠ WARNING

Improperly connecting or disconnecting battery cables can result in an explosion and cause serious injury or death. When removing the battery, always disconnect the negative (black) cable first. When reinstalling the battery, always connect the negative (black) cable last.

⚠ WARNING

Battery electrolyte is poisonous. It contains sulfuric acid. Serious burns can result from contact with skin, eyes or clothing.

Antidote:

External: Flush with water.

Internal: Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call physician immediately.

Eyes: Flush with water for 15 minutes and get prompt medical attention.

Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc. away. Ventilate when charging or using in an enclosed space. Always shield eyes when working near batteries. KEEP OUT OF REACH OF CHILDREN.

Your vehicle may have either a sealed battery, which requires little maintenance, or a conventional battery. A sealed battery can be identified by its flat covers on the top of the battery. A conventional battery has six filler caps on the top of the battery.

Always keep battery terminals and connections free of corrosion. If cleaning is necessary, remove corrosion with a stiff wire brush. Wash with a solution of one tablespoon baking soda and one cup water. Rinse well with tap water and dry off with clean shop towels. Coat the terminals with dielectric grease or petroleum jelly. Be careful not to allow cleaning solution or tap water into a conventional battery.

MAINTENANCE
Battery
Battery Removal

1. Place the transmission in PARK.
2. Remove the seat.
3. Disconnect the battery hold-down strap.
4. Remove the battery cover (if equipped).
5. On conventional batteries, remove the battery vent tube.
6. Disconnect the black (negative) battery cable first.
7. Disconnect the red (positive) battery cable last.
8. Lift the battery out of the vehicle. Be careful not to tip a conventional battery sideways, which could spill electrolyte.

NOTICE: If electrolyte spills, immediately wash it off with a solution of one tablespoon baking soda and one cup water to prevent damage to the vehicle.

Battery

Battery Installation

1. Ensure that the battery is fully charged.
2. Place the battery in the battery holder.
3. With conventional batteries, install the battery vent tube (sealed batteries do not have a vent tube). The vent tube must be free of obstructions and securely installed. Route the tube away from the frame and vehicle body to prevent contact with electrolyte.

⚠

Battery gases could accumulate in an improperly installed vent tube and cause an explosion, resulting in serious injury or death. Always ensure that the vent tube is free of obstructions and is securely installed as recommended.

4. On conventional batteries, coat the terminals with dielectric grease or petroleum jelly.
5. Connect and tighten the red (positive) cable first.
6. Connect and tighten the black (negative) cable last.
7. Secure the battery hold-down strap.
8. Reinstall the battery cover (if equipped).
9. Verify that cables are properly routed. Cables should be safely tucked away at the front and rear of the battery.
10. Reinstall the seat.

MAINTENANCE
Battery
Battery Storage

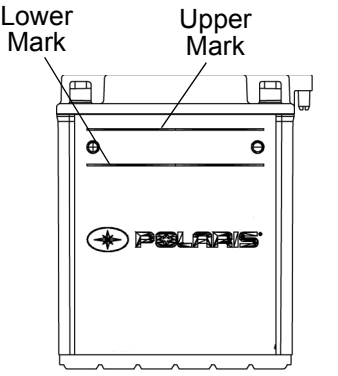
Whenever the vehicle is not used for a period of three months or more, remove the battery from the vehicle, ensure that it's fully charged, and store it out of the sun in a cool, dry place. Check battery voltage each month during storage and recharge as needed to maintain a full charge.

Battery charge can be maintained by using a POLARIS Battery Tender charger or by charging about once a month to make up for normal self-discharge. Battery Tender can be left connected during the storage period, and will automatically charge the battery if the voltage drops below a pre-determined point. See page 122 for the part numbers of POLARIS products.

Battery Fluid (Conventional Battery)

Check the battery fluid level often. Maintain the fluid level between the upper and lower level marks.

Add only distilled water. Tap water contains minerals that are harmful to a battery.



Battery

Battery Charging (Conventional Battery)

1. Remove the battery from the vehicle to prevent damage from leaking or spilled electrolyte during charging. See page 108.
2. Charge the battery with a charging output no larger than 1/10 of the battery's amp/hr rating. Charge as needed to raise the specific gravity to 1.270 or greater.
3. Reinstall the battery. See page 109. Make sure the positive terminal is toward the front of the vehicle.

Battery Charging (Sealed Battery)

The following battery charging instructions apply only to the installation of a sealed battery. Read all instructions before proceeding with the installation of this battery.

The sealed battery is already filled with electrolyte and has been sealed and *fully charged* at the factory. *Never* pry the sealing strip off or add any other fluid to this battery.

The single most important thing about maintaining a sealed battery is to keep it fully charged. Since the battery is sealed and the sealing strip cannot be removed, you must use a voltmeter or multimeter to measure DC voltage.

MAINTENANCE
Battery
Battery Charging (Sealed Battery)

For a refresh charge, follow all instructions carefully.

1. Check the battery voltage with a voltmeter or multimeter. A fully charged battery will register 12.8 V or higher.
2. If the voltage is less than 12.8 volts, recharge the battery at 1.2 amps or less until battery voltage is 12.8 or greater.
3. When using an automatic charger, refer to the charger manufacturer's instructions for recharging. When using a constant current charger, use the following guidelines for recharging.

⚠

An overheated battery may explode, causing severe injury or death. Always watch charging times carefully. Stop charging if the battery becomes very warm to the touch. Allow it to cool before resuming charging.

Always verify battery condition before and 1-2 hours after the end of charging.

State of Charge	Voltage	Action	Charge Time (Using constant current charger @ standard amps specified on top of battery)
100%	12.8-13.0 volts	None, check at 3 mos. from date of manufacture	None required
75%-100%	12.5-12.8 volts	May need slight charge, if no charge given, check in 3 months	3-6 hours
50%-75%	12.0-12.5 volts	Needs charge	5-11 hours
25%-50%	11.5-12.0 volts	Needs charge	At least 13 hours, verify state of charge
0%-25%	11.5 volts or less	Needs charge with desulfating charger	At least 20 hours

Cleaning and Storage

Washing the Vehicle

Keeping your POLARIS vehicle clean will not only improve its appearance but it can also extend the life of various components.

High water pressure may damage components. POLARIS recommends washing the vehicle by hand or with a garden hose, using mild soap.

Certain products, including insect repellents and chemicals, will damage plastic surfaces. Do not allow these types of products to contact the vehicle.

1. Use a professional-type washing cloth, cleaning the upper body first and the lower parts last.
2. Rinse with clean water frequently.
3. Dry surfaces with a chamois to prevent water spots.

Washing Tips

- Avoid the use of harsh cleaners, which can scratch the finish.
- Do not use a power washer to clean the vehicle.
- Do not use medium to heavy duty compounds on the finish.
- Always use clean cloths and pads for cleaning and polishing. Old or reused cloths and pads may contain dirt particles that will scratch the finish.

MAINTENANCE
Cleaning and Storage
Washing the Vehicle

If a high pressure water system is used for cleaning (not recommended), exercise extreme caution. The water may damage components and could remove paint and labels. Avoid directing the water stream at the following items:

- Wheel bearings
- Radiator
- Transmission seals
- Brakes
- Cab and body panels
- Electrical components
- Switches and controls
- Labels and decals

If an informational or graphic label becomes illegible or comes off, contact your POLARIS dealer to purchase a replacement. Replacement *safety* labels are provided by POLARIS at no charge.

Grease all zerk fittings immediately after washing. Allow the engine to run for a while to evaporate any water that may have entered the engine or exhaust system.

Polishing the Vehicle

POLARIS recommends the use of common household aerosol furniture polish for polishing the finish on your POLARIS vehicle. Follow the instructions on the container.

Polishing Tips

- Avoid the use of automotive products, some of which can scratch the finish of your vehicle.
- Always use clean cloths and pads for cleaning and polishing. Old or reused cloths and pads may contain dirt particles that will scratch the finish.

Cleaning and Storage

Chrome Wheel Care (if equipped)

Proper maintenance will protect chrome wheels from corrosion, preserve wheel life and ensure a "like new" appearance for many years. Chrome wheels exposed to road salt (or salt in the air in coastal areas) are more susceptible to corrosion if not properly cleaned. Clean chrome wheels more often if they're exposed to salt or other corrosive elements.

1. Wash chrome wheels frequently. Use a mild detergent. Never use abrasive cleaners on plated or painted surfaces.
2. Rinse well with clear water. Soap, detergents, salt, dirt, mud and other elements can cause corrosion.
3. Polish the clean chrome wheels periodically. Use an automotive grade chrome polish.
4. Routinely and liberally apply a weather resistant wax to each polished chrome wheel. Choose a product suitable for chrome finishes. Read and follow the product labels and instructions.

Removing Corrosion

If light rust is found on the chrome finish, use steel wool (#0000-OTT grade) to remove it. Gently rub the affected areas with the steel wool until the corrosion has been removed. Clean and polish the wheel as outlined above.

MAINTENANCE
Cleaning and Storage
Storage Tips

⚠

Starting the engine during the storage period will disturb the protective film created by fogging and damage could occur. Never start the engine during the storage period.

Clean the Exterior

Make any necessary repairs and clean the vehicle as recommended. See page 113.

Stabilize the Fuel

1. Fill the fuel tank.
2. Add POLARIS Carbon Clean Fuel Treatment or POLARIS Fuel Stabilizer. Follow the instructions on the container for the recommended amount. Carbon Clean removes water from fuel systems, stabilizes fuel and removes carbon deposits from pistons, rings, valves and exhaust systems.
3. Allow the engine to run for 15-20 minutes to allow the stabilizer to disperse through the fuel tank and carburetor.
4. Turn the fuel valve off.
5. Drain the carburetor bowl.

Oil and Filter

Change the oil and filter. See page 71.

Air Filter / Air Box

1. Inspect and clean (or replace) the pre-cleaner and air filter.
2. Clean the air box.
3. Clean or replace the breather filter.
4. Drain the sediment tube.

Recoil Housing (if equipped)

1. Drain the recoil housing. See page 106.

Cleaning and Storage

Storage Tips

Fluid Levels

Inspect the fluid levels. Change fluids as recommended in the Periodic Maintenance Chart beginning on page 63.

- Demand drive unit (front gearcase)
- Transmission
- Rear gearcase (if equipped)
- Brake fluid (change every two years and any time the fluid looks dark or contaminated)
- Coolant (test strength/fill)

Fog the Engine

1. Treat the fuel system with POLARIS Carbon Clean. See page 116.
2. Remove the spark plug. Pour 30-45 ml of engine oil into the plug holes.
3. Reinstall the spark plugs. Torque to specification.
4. Apply dielectric grease to the inside of each spark plug cap. Reinstall the caps.
5. Turn the engine over several times (using the recoil starter, if equipped). Oil will be forced in and around the piston rings and ring lands, coating the cylinder with a protective film of fresh oil.
6. If POLARIS fuel system additive is not used, the fuel tank, fuel lines, and carburetor should be completely drained of gasoline.
7. To eliminate any fuel remaining in the carburetor, run the engine until it stops.

MAINTENANCE
Cleaning and Storage
Storage Tips
Inspect and Lubricate
Inspect all cables and lubricate all areas of the vehicle as recommended in the Periodic Maintenance Chart beginning on page 63.

Battery Storage
See pages 110-111 for storage and charging procedures.

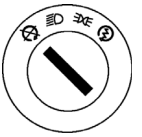
Storage Area/Covers
1. Set the tire pressure and safely support the vehicle with the tires slightly off the ground.
2. Be sure the storage area is well ventilated.
3. Cover the vehicle with a genuine POLARIS cover. Do not use plastic or coated materials. They do not allow enough ventilation to prevent condensation, and may promote corrosion and oxidation.

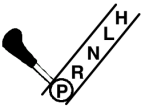
Accessories
Auxiliary power outlets provide 12-volt power for operating accessories. Accessory outlets are available for all models. POLARIS also has a wide range of additional accessories available for your vehicle. Always install accessories that are approved for use on this vehicle. Please see your POLARIS dealer.

Transporting the Vehicle

Follow these procedures when transporting the vehicle.

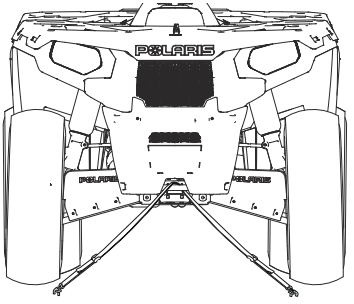
1. Stop the engine.
2. Place the transmission in PARK.
3. Secure the fuel cap, oil cap and seat.

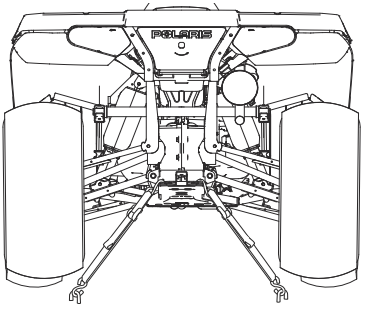




4. Remove the key to prevent loss during transporting.

5. Always tie the frame of the POLARIS vehicle to the transporting unit securely with suitable straps or rope. Do not attach tie straps to the front A-arm bolt pockets.





Towing a Disabled Vehicle

If towing the vehicle is necessary, shift the transmission into neutral for better mobility and to prevent damage to the belt.

Always attach the tow rope to the frame of the POLARIS vehicle.

SPECIFICATIONS

SPORTSMAN FOREST 500	
Maximum Weight Load Capacity	485 lbs. (220 kg) (operator, cargo, accessories)
Dry Weight	325 kg +/- 7 % , based on configuration
Fuel Capacity	4.25 gal. (16 l)
Engine Oil Capacity	2 qts. (1.9 l)
Coolant Capacity	2.7 qts. (2.5 l)
Demand Drive Fluid Capacity	9 oz. (265 ml)
Transmission Oil Capacity	32 oz. (948 ml)
Front Rack/Storage Box Capacity	90 lbs. (41 kg)
Rear Rack/Storage Box Capacity	180 lbs. (81.6 kg)
Unbraked Trailer Towing Capacity*	1786 lbs. (810 kg)
Overall Length	83 in. (211 cm)
Overall Width	48 in. (122 cm)
Overall Height	48 in. (122 cm)
Wheelbase	50.75 in. (128.9 cm)
Ground Clearance	11 in. (28 cm)
Minimum Turning Radius	65 in. (165 cm) unloaded
Engine	EH500PLE (Low Torque Capacity 4-Stroke)
Displacement	498 cc
Engine Power	27 kW
Bore x Stroke	92 x 75
Alternator Output	260 w
Compression Ratio	10.2:1
Fuel System	40 mm Mikuni carburetor
Pilot Jet	40
Main Jet	155
Needle Jet	X-6M
Jet Needle	6MGHI 194
Pilot Screw	By flow (taper 12.5°) (Brass Plug)
Ignition System	Digital CDI
Ignition Timing	30° +/- 2° @ 5000 RPM
Spark Plug / Gap	NGK BKR6E / .035 in. (0.9 mm)
Lubrication System	Dry Sump
Seat	Single Seat, length 650 mm
Steering System	Akerman Principle, with handlebar controls
Transmission Power System	Shaft drive on all wheels
Transmission and Gears	High/Low/Neutral/Reverse/Parking
Driving System Type	Automatic PVT (POLARIS Variable Transmission)

* Based on EU Directive 76/432/EC

SPORTSMAN FOREST 500	
Front Suspension	MacPherson strut with 8.2" (21 cm) travel
Rear Suspension	Progressive rate with 9.5" (24 cm) travel
Gear Reduction, Low	23.91:1
Gear Reduction, Reverse	21.74:1
Gear Reduction, Forward	10.57:1
Drive Ratio, Front	3.82:1
Tires Type Front	Off Road Style, Deep Tread Design Size 25x8-12 / 5 psi (34.5 KPa)
Tires Type Rear	Off Road Style, Deep Tread Design Size 25x11-12 / 5 psi (34.5 KPa)
Brakes, Front/Rear	Single-Control handlebar hydraulic disc on all wheels
Brakes, Auxiliary	Foot-Activated Hydraulic Disc on all wheels
Parking Brake	Hydraulic lock on all wheels, Mechanical Lock in Park
Hitch	Rear mount for attachment of coupling devices
Winch	Front permanent Installed winch with 2500 Lbs, 1,125 Kg Capacity
Headlight	2 dual beam on bumper (55/60 watt)
Parking Lights	5 watts
Taillights	8.26 watts
Brake Light	26.9 watts
Instrument Cluster	LCD

Jetting Chart

ALTITUDE Meters (Feet)	AMBIENT TEMPERATURE	
	Below 40° F (Below 5° C)	+40°F and above (+5°C and above)
0-1800 (0-6000)	160	155
1800-3700 (6000-12000)	152.5	147.5

Clutching

Altitude		Shift Weight	Drive Clutch Spring	Driven Clutch Spring	Helix/Spring Setting
Meters (Feet)	0-1800 (0-6000)	10 WHF PN 5632283	Blue/Green PN 7041157	Black PN 7041782	41-37° PN 5132344 2+2
	1800-3700 (6000-12000)	10 RH PN 5630709	Blue/Green PN 7041157	Black PN 7041782	41-37° PN 5132344 2+2

POLARIS PRODUCTS

Part Number	Description
	Engine Lubricant
2870791	Fogging Oil (12 oz. Aerosol)
2876244	PS-4 PLUS Performance Synthetic 2W-50 4-Cycle Oil (.95 l)
2876245	PS-4 PLUS Performance Synthetic 2W-50 4-Cycle Oil (3.8 l)
	Gearcase / Transmission Lubricants
2878068	AGL PLUS Transmission Fluid (.95 l)
2878069	AGL PLUS Transmission Fluid (3.8 l)
2877922	Demand Drive Plus Fluid (.95 l)
2877923	Demand Drive Plus Fluid (3.8 l)
2870465	Pump for 3.8 liter jug
2871654	Premium Demand Drive Hub Fluid (237 ml)
2872277	Premium Demand Drive Hub Fluid (9.5 l)
	Coolant
2871323	60/40 Coolant (3.8 l)
2871534	60/40 Coolant (.95 l)
	Grease / Specialized Lubricants
2871312	Grease Gun Kit, Premium All Season
2871322	Premium All Season Grease (89 ml cartridge)
2871423	Premium All Season Grease (414 ml cartridge)
2871460	Starter Drive Grease
2871515	Premium U-Joint Lube (89 ml)
2871551	Premium U-Joint Lube (414 ml)
2871329	Dielectric Grease (Nyogel™)
	Additives / Miscellaneous
2871326	Carbon Clean Plus
2870652	Fuel Stabilizer
2872189	DOT 4 Brake Fluid
2872893	Engine Degreaser
2871956	Loctite™ 565 Thread Sealant
2871076	POLARIS Battery Tender™ Charger

Drive Belt Wear/Burn

Possible Cause	Solution
Driving onto a pickup or tall trailer in high range	Use low range.
Starting out going up a steep incline	Use low range or turn around using the K-turn (see page 26).
Driving at low RPM or speed (5-11 km/h)	Drive at a higher speed or use low range more frequently.
Insufficient warm-up at low ambient temperatures	Warm the engine at least 5 minutes. With the transmission in neutral, advance the throttle to about 1/8 throttle in short bursts, 5 to 7 times. The belt will become more flexible and prevent belt burning.
Slow/easy clutch engagement	Use the throttle quickly and effectively.
Towing/pushing at low RPM/low ground speed	Use low range only.
Utility use/plowing	Use low range only.
Stuck in mud or snow	Shift the transmission to low range. Carefully use fast, aggressive throttle application to engage clutch. **WARNING**: Excessive throttle may cause loss of control and vehicle overturn.
Climbing over large objects from a stopped position	
Belt slippage from water or snow ingestion into the PVT system	Dry out the PVT. See page 105. Inspect clutch seals for damage if repeated leaking occurs.
Clutch malfunction	See your POLARIS dealer.
Poor engine performance	Check for fouled plugs or foreign material in gas tank or fuel lines. See your dealer.
Slippage from failure to warm up belt	Always warm up the belt by operating below 48 km/h for 1.6 km. Operate 8 km or more when temperature is below freezing.
Wrong or missing belt	Install the recommended belt.
Improper break-in	Always break in a new belt and/or clutch. See page 52.

TROUBLESHOOTING

Engine Does Not Rotate

Possible Cause	Solution
Tripped circuit breaker	Reset the breaker
Low battery voltage	Recharge the battery to 12.8 VDC
Loose battery connections	Check all connections and tighten
Loose solenoid connections	Check all connections and tighten

Engine Rotates, Fails to Start

Possible Cause	Solution
Out of fuel	Refuel
Clogged fuel valve or filter	Replace the filter
Water is present in fuel	Drain the fuel system and refuel
Old or non-recommended fuel	Replace with fresh recommended fuel
Fuel valve is turned off	Turn the fuel valve on
Fouled or defective spark plug(s)	Inspect plugs and replace if necessary
No spark to spark plug	Inspect plugs, verify stop switch is on
Water or fuel in crankcase	Immediately see your POLARIS dealer
Low battery voltage	Recharge the battery to 12.8 VDC
Mechanical failure	See your dealer

Engine Backfires

Possible Cause	Solution
Weak spark from spark plug	Inspect, clean and/or replace spark plugs
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs
Old or non-recommended fuel	
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with fresh recommended fuel
Incorrectly installed spark plug wires	See your dealer
Incorrect ignition timing	See your dealer
Mechanical failure	See your dealer

Engine Pings or Knocks

Possible Cause	Solution
Poor quality or low octane fuel	Replace with recommended fuel
Incorrect ignition timing	See your dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs

Engine Runs Irregularly, Stalls or Misfires

Possible Cause	Solution
Fouled or defective spark plug(s)	Inspect, clean and/or replace spark plug(s)
Worn or defective spark plug wires	See your dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with new fuel
Low battery voltage	Recharge battery to 12.8 VDC
Kinked or plugged fuel tank vent line	Inspect and replace
Incorrect fuel	Replace with recommended fuel
Clogged air filter	Inspect and clean or replace
Reverse speed limiter malfunction	See your dealer
Electronic throttle control malfunction	See your dealer
Other mechanical failure	See your dealer
Possible Lean Fuel Cause	**Solution**
Low or contaminated fuel	Add or change fuel, clean the fuel system
Low octane fuel	Replace with recommended fuel
Clogged fuel filter	Replace filter
Kinked or plugged fuel vent line	Inspect and replace (if equipped)
Incorrect fuel	Replace with recommended fuel
Incorrect jetting	See your POLARIS dealer
Possible Rich Fuel Cause	**Solution**
Fuel is very high octane	Replace with lower octane fuel
Overuse of choke	Inspect, clean and/or replace spark plugs
Stopping/starting without adequate warm-up	Allow engine to warm up before operating and/or stopping
Incorrect fuel	Replace with recommended fuel
Clogged air filter	Inspect and clean or replace
Incorrect jetting	See your POLARIS dealer

TROUBLESHOOTING

Engine Stops or Loses Power

Possible Cause	Solution
Out of fuel	Refuel, cycle key to ON position three times for 5 seconds each, then start
Kinked or plugged fuel vent line	Inspect and replace (if equipped)
Overuse of choke	Inspect, clean and/or replace spark plugs
Water is present in fuel	Replace with fresh recommended fuel
Old or non-recommended fuel	Replace with fresh recommended fuel
Fouled or defective spark plug(s)	Inspect, clean and/or replace spark plug(s)
Worn or defective spark plug wires	See your dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plug
Loose ignition connections	Check all connections and tighten
Low battery voltage	Recharge the battery to 12.8 VDC
Incorrect fuel	Replace with fresh recommended fuel
Clogged air filter	Inspect and clean or replace
Reverse speed limiter malfunction	See your dealer
Electronic throttle control malfunction	See your dealer
Other mechanical failure	See your dealer
Overheated engine	Clean radiator screen and core, clean engine exterior, see your dealer

Engine Overheating

Possible Cause	Solution
Debris lodged in screen	Remove and clean the screen. Pull on the top portion of the screen, then remove the lower portion.
Plugged Radiator	Use a garden hose to flush any debris from the radiator fins. NOTE: High pressure washers can deform the radiator fins and reduce cooling efficiency.

LIMITED WARRANTY

POLARIS Industries Inc., 2100 Highway 55, Medina, MN 55340, gives a SIX MONTH LIMITED WARRANTY on all components of the POLARIS vehicle against defects in material or workmanship. This warranty covers the parts and labor charges for repair or replacement of defective parts which are covered by this warranty. This warranty begins on the date of purchase. The duration of this warranty may vary depending on location. This warranty is transferable to another consumer during the warranty period through a POLARIS dealer.

REGISTRATION

At the time of sale, the Warranty Registration Form must be completed by your dealer and submitted to POLARIS within ten days. Upon receipt of this registration, POLARIS will record the registration for warranty. No verification of registration will be sent to the purchaser as the copy of the Warranty Registration Form will be the warranty entitlement. If you have not signed the original registration and received the "customer copy", please contact your dealer immediately. NO WARRANTY COVERAGE WILL BE ALLOWED UNLESS YOUR POLARIS VEHICLE IS REGISTERED WITH POLARIS.

Initial dealer preparation and set-up of your vehicle is very important in ensuring trouble-free operation. Purchasing a machine in the crate or without proper dealer set-up will void your warranty coverage.

WARRANTY

WARRANTY COVERAGE AND EXCLUSIONS: LIMITATIONS OF WARRANTIES AND REMEDIES

The POLARIS limited warranty excludes any failures that are not caused by a defect in material or workmanship. This warranty does not cover accidental damage, normal wear and tear, abuse or improper handling. This warranty also does not cover any vehicle that has been altered structurally, modified, neglected, improperly maintained, used for racing, or used for purposes other than for which it was manufactured, or for any damages which occur during trailer transit or as a result of unauthorized service or the use of unauthorized parts. In addition, this warranty does not cover physical damage to paint or finish, stress cracks, tearing or puncturing of upholstery material, corrosion, or defects in parts, components or the vehicle due to fire, explosions or any other cause beyond POLARIS' control.

Warranty does not apply to parts exposed to friction surfaces, stresses, environmental conditions and/or contamination, for which they were not designed or not intended, including but not limited to the following items:

- Wheels and tires
- Suspension components
- Brake components
- Seat components
- Clutches and components
- Steering components
- Batteries
- Light bulbs/Sealed beam lamps
- Finished and unfinished surfaces
- Carburetor/Throttle body components
- Engine components
- Drive belts
- Hydraulic components
- Circuit breakers/Fuses
- Electronic components

WARRANTY COVERAGE AND EXCLUSIONS: LIMITATIONS OF WARRANTIES AND REMEDIES

Warranty applies to the product only and does not allow for coverage of personal loss. Some items are considered "consumable," meaning they are considered part of normal maintenance or part of completing an effective repair. The following items are excluded from warranty coverage in the event of a warranty claim:

- Spark Plugs
- Filters
- Fuel
- Sealants
- Hotel fees
- Towing charges
- Mileage
- Rentals/Loss of product use
- Lubricants such as oil, grease, etc.
- Batteries (unless defective)
- Cosmetic damage/repair
- Coolants
- Meals
- Shipping/ handling fees
- Product pick-up/delivery
- Loss of vacation/personal time

This warranty also excludes failures resulting from improper lubrication; improper engine timing; improper fuel; surface imperfections caused by external stress, heat, cold or contamination; operator error or abuse; improper component alignment, tension, adjustment or altitude compensation; failure due to snow, water, dirt or other foreign substance ingestion/contamination; improper maintenance; modified components; use of aftermarket components resulting in failure; unauthorized repairs; repairs made after the warranty period expires or by an unauthorized repair center; use of the product in competition or for commercial purposes. Warranty will not apply to any product which has been damaged by abuse, accident, fire or any other casualty not determined a defect of materials or workmanship.

WARRANTY

LIMITATIONS OF WARRANTIES AND REMEDIES

This warranty does not cover the use of unauthorized lubricants, chemicals, or fuels that are not compatible with the vehicle. The exclusive remedy for breach of this warranty shall be, at POLARIS' exclusive option, repair or replacement of any defective materials, or components or products. THE REMEDIES SET FORTH IN THIS WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. POLARIS SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE, OR OTHER TORT OR OTHERWISE. THIS EXCLUSION OF CONSEQUENTIAL, INCIDENTAL, AND SPECIAL DAMAGES IS INDEPENDENT FROM AND SHALL SURVIVE ANY FINDING THAT THE EXCLUSIVE REMEDY FAILED OF ITS ESSENTIAL PURPOSE. Some states do not permit the exclusion or limitation of incidental or consequential damages or implied warranties, so the above limitations or exclusions may not apply to you if inconsistent with controlling state law.

ALL IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO THE ABOVE SIX MONTH WARRANTY PERIOD. POLARIS FURTHER DISCLAIMS ALL EXPRESS WARRANTIES NOT STATED IN THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you if inconsistent with controlling state law.

HOW TO OBTAIN WARRANTY SERVICE

If your vehicle requires warranty service, you must take it to a POLARIS dealer authorized to repair POLARIS vehicles. When requesting warranty service you must present your copy of the Warranty Registration form to the dealer. (THE COST OF TRANSPORTATION TO AND FROM THE DEALER IS YOUR RESPONSIBILITY). POLARIS suggests that you use your original selling dealer; however, you may use any POLARIS Servicing Dealer to perform warranty service.

Please work with your dealer to resolve any warranty issues. Should your dealer require any additional assistance they will contact the appropriate personnel at POLARIS.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

If any of the above terms are void because of state or federal law, all other warranty terms will remain in effect.

MAINTENANCE LOG

Present this section of your manual to your dealer each time your vehicle is serviced. This will provide you and future owners with an accurate log of maintenance and services performed.

DATE	KILOMETERS OR HOURS	TECHNICIAN	SERVICE PERFORMED / COMMENTS

MAINTENANCE LOG

DATE	KILOMETERS OR HOURS	TECHNICIAN	SERVICE PERFORMED / COMMENTS

MAINTENANCE LOG

DATE	KILOMETERS OR HOURS	TECHNICIAN	SERVICE PERFORMED / COMMENTS

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